```
2018.06.03 08:17:47 ================================================================================
2018.06.03 08:17:47 Starting sadmlib_std_demo.sh V3.2 - SADM Lib. V2.26
2018.06.03 08:17:47 Server Name: holmes.maison.ca - Type: LINUX
2018.06.03 08:17:47 O/S: CENTOS 7.5.1804 - Code Name: Core
2018.06.03 08:17:47 ===============================================
2018.06.03 08:17:47
```

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================================================================================
sadmlib_std_demo.sh v3.2 - Library v2.26
User Var. that affect SADMIN behavior  Description                      This System Result
================================================================================
[001] $SADM_VER                        Script Version Number            : .3.2.
[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               : .8390.
[006] $SADM_MULTIPLE_EXEC              Allow running multiple copy      : .N.
[007] $SADM_USE_RCH                    Gen. entry in .rch file          : .Y.
[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           : .Y.
[011] $SADM_LOG_FOOTER                 Generate Footer in  log          : .Y.
[012] $SADM_EXIT_CODE                  Script Exit Return Code          : .0.
```

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================================================================================
sadmlib_std_demo.sh v3.2 - Library v2.26
Calling Functions                      Description                      This System Result
================================================================================
[001] $(sadm_get_release)              SADMIN Release Number (XX.XX)    : .0.86.
[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.
[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           : .1528028267.
```

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[015] $(sadm_epoch_to_date 1528028267) Convert epoch time to date        : .2018.06.3 08:17:47.
      WDATE='2018.06.3 08:17:47'
[016] $(sadm_date_to_epoch "$WDATE")   Convert Date to epoch time        : .1528028267.
      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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================================================================================================
sadmlib_std_demo.sh v3.2 - Library v2.26
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             : .3357.
[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|374999|101427.
[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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================================================================================================
sadmlib_std_demo.sh v3.2 - Library v2.26
Overview of sadm_start and sadm_stop function
================================================================================================
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
```

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 # 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 simultaniously (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)




=====================================================================================================
sadmlib_std_demo.sh v3.2 - Library v2.26
SADMIN CONFIG FILE VARIABLES           Description                         This System Result
=====================================================================================================
[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_MAIL_TYPE                   0=NoMail 1=OnError 3=OnSuccess 4=All: .1.
[005] $SADM_CIE_NAME                    Your Company Name                   : .Batcave.
[006] $SADM_DOMAIN                      Server Creation Default Domain      : .maison.ca.
[007] $SADM_USER                        SADMIN User Name                    : .sadmin.
[008] $SADM_GROUP                       SADMIN Group Name                   : .sadmin.
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[009] $SADM_WWW_USER                   User that Run Apache Web Server       : .apache.
[010] $SADM_WWW_GROUP                  Group that Run Apache Web Server      : .apache.
[011] $SADM_DBNAME                     SADMIN Database Name                  : .sadmin.
[012] $SADM_DBHOST                     SADMIN Database Host                  : .sadmin.maison.ca.
[013] $SADM_DBPORT                     SADMIN Database Host TCP Port         : .3306.
[014] $SADM_RW_DBUSER                  SADMIN Database Read/Write User       : .sadmin.
[015] $SADM_RW_DBPWD                   SADMIN Database Read/Write User Pwd   : .Nimdas17!.
[016] $SADM_RO_DBUSER                  SADMIN Database Read Only User        : .squery.
[017] $SADM_RO_DBPWD                   SADMIN Database Read Only User Pwd    : .Query18!.
[018] $SADM_RRDTOOL                    RRDTOOL Binary Location               : ./bin/rrdtool.
[019] $SADM_SSH_PORT                   SSH Port to communicate with client  : .32.
[020] $SADM_NMON_KEEPDAYS              Nb. of days to keep nmon perf. file   : .60.
[021] $SADM_RCH_KEEPDAYS               Nb. days to keep unmodified rch file  : .60.
[022] $SADM_LOG_KEEPDAYS               Nb. days to keep unmodified log file  : .60.
[023] $SADM_MAX_RCLINE                 Trim rch file to this max. of lines   : .125.
[024] $SADM_MAX_LOGLINE                Trim log to this maximum of lines     : .2000.
[025] $SADM_NETWORK1                   Network/Netmask 1 inv. IP/Name/Mac    : .192.168.1.0/24.
[026] $SADM_NETWORK2                   Network/Netmask 2 inv. IP/Name/Mac    : ..
[027] $SADM_NETWORK3                   Network/Netmask 3 inv. IP/Name/Mac    : ..
[028] $SADM_NETWORK4                   Network/Netmask 4 inv. IP/Name/Mac    : ..
[029] $SADM_NETWORK5                   Network/Netmask 5 inv. IP/Name/Mac    : ..
[030] $SADM_MKSYSB_NFS_SERVER          AIX MKSYSB NFS Server IP or Name      : .batnfs.maison.ca.
[031] $SADM_MKSYSB_NFS_MOUNT_POINT     AIX MKSYSB NFS Mount Point            : ./volume1/mksysb.
[032] $SADM_MKSYSB_BACKUP_TO_KEEP      AIX MKSYSB NFS Backup - Nb. to keep   : .2.
[033] $SADM_REAR_NFS_SERVER            Rear NFS Server IP or Name            : .batnas.maison.ca.
[034] $SADM_REAR_NFS_MOUNT_POINT       Rear NFS Mount Point                  : ./volume1/Linux_DR.
[035] $SADM_REAR_BACKUP_TO_KEEP        Rear NFS Backup - Nb. to keep         : .3.
[036] $SADM_BACKUP_NFS_SERVER          NFS Backup IP or Server Name          : .batnas.maison.ca.
[037] $SADM_BACKUP_NFS_MOUNT_POINT     NFS Backup Mount Point                : ./volume1/backup_linux.
[038] $SADM_DAILY_BACKUP_TO_KEEP       Nb. of Daily Backup to keep           : .3.
[039] $SADM_WEEKLY_BACKUP_TO_KEEP      Nb. of Weekly Backup to keep          : .3.
[040] $SADM_MONTHLY_BACKUP_TO_KEEP     Nb. of Monthly Backup to keep         : .3.
[041] $SADM_YEARLY_BACKUP_TO_KEEP      Nb. of Yearly Backup to keep          : .2.
[042] $SADM_WEEKLY_BACKUP_DAY          Weekly Backup Day (1=Mon,...,7=Sun)   : .5.
[043] $SADM_MONTHLY_BACKUP_DATE        Monthly Backup Date (1-28)            : .1.
[044] $SADM_YEARLY_BACKUP_MONTH        Month to take Yearly Backup (1-12)    : .12.
[045] $SADM_YEARLY_BACKUP_DATE         Date to do Yearly Backup(1-DayInMth)  : .31.
[046] $SADM_STORIX_NFS_SERVER          Storix NFS Server IP or Name          : .batnas.maison.ca.
[047] $SADM_STORIX_NFS_MOUNT_POINT     Storix NFS Mount Point                : ./volume1/storix.
[048] $SADM_STORIX_BACKUP_TO_KEEP      Storix NFS Backup - Nb. to Keep       : .3.
```

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================================================================================
[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.


================================================================================
sadmlib_std_demo.sh v3.2 - Library v2.26
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.


================================================================================
sadmlib_std_demo.sh v3.2 - Library v2.26
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_1.8390.
[005] $SADM_TMP_FILE2           User usable Temp Work File 2     : ./sadmin/tmp/sadmlib_std_demo_2.8390.
[006] $SADM_TMP_FILE3           User usable Temp Work File 3     : ./sadmin/tmp/sadmlib_std_demo_3.8390.
[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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======================================================================================
sadmlib_std_demo.sh v3.2 - Library v2.26
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_LSCPU                  Cmd. 'lscpu', Socket & thread info  : ./bin/lscpu.
[010] $SADM_NMON                   Cmd. 'nmon', Collect Perf Statistic : ./bin/nmon.
[011] $SADM_PARTED                 Cmd. 'parted', Get Disk Real Size   : ./sbin/parted.
[012] $SADM_ETHTOOL               Cmd. 'ethtool', Get System IP Info  : ./sbin/ethtool.
[013] $SADM_SSH                    Cmd. 'ssh', SSH to SADMIN client    : ./bin/ssh.
[014] $SADM_SSH_CMD               Cmd. 'ssh', SSH to Connect to client: ./bin/ssh -qnp32.


2018.06.03 08:17:53
2018.06.03 08:17:53 ==================================================
2018.06.03 08:17:53 Script return code is 0
2018.06.03 08:17:53 Script execution time is 00:00:06
2018.06.03 08:17:53 Trim History /sadmin/dat/rch/holmes_sadmlib_std_demo.rch to 125 lines
2018.06.03 08:17:53 User requested mail only if script fail - Will not send mail
2018.06.03 08:17:53 Trim log /sadmin/log/holmes_sadmlib_std_demo.log to 2000 lines
2018.06.03 08:17:53 Sun Jun  3 08:17:53 EDT 2018 - End of sadmlib_std_demo.sh
2018.06.03 08:17:53 ======================================================================================
2018.06.03 08:17:53
2018.06.03 08:17:53
2018.06.03 08:17:53
2018.06.03 08:17:53
```