



Interactive SAS Analysis Service (iSAS) within AIX Unix SAS Server

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What's iSAS?

- Interactive SAS Analysis Service (iSAS)
 - is a SAS macro-based package that enables programmers to run programs in an interactive way under Unix SAS environment, in which, frequently used Unix commands, bash scripts, Clearcase commands, as well as in-house GPS working environment, template codes, TFL and utility macros were incorporated to ensure a more straightforward and user-friendly statistical reporting activities. It works equivalently as we do with GPS through Citrix for most occasions.
 - is designed to be a good companion of GPS.
- The goal of iSAS is to provide our GPS users an option to complete their daily programming activities more efficiently and effectively without the use of GPS through Citrix.

GPS: A Novartis Specific Environment for Global Programming and Statistics

Key Features of iSAS (1)

- Interactive
 - command-line mode in terminal
- Resources Saving
 - Work well even with poor network connections
- Could be Always Online
 - Almost no additional resources occupied when your session is in idle mode
- Quicker Log-in and Log-off
 - A few seconds, without typing password each time.
- Integrated Automatic Mail Service
 - Support mail notification for job done, log warnings/errors, outputs, etc.

Key Features of iSAS (2)

■ Faster Response

- Login Unix server directly in a few seconds.
- Immediate interactive response to any user commands or orders via terminal window or email message (could be implemented as needed).
- No screen delay issues in most situations.

■ Higher Integration

- Frequently used Unix, Clearcase commands and SAS macros were integrated with brief names, e.g. %cd(pgm_eff) will redirect the current directory to /vob/[Project Folder]/[Study Folder]/csr_1/pgm/eff (real folder name will depends on which project, study and reporting activity you are working on).
- More straightforward and easier to use.

Key Features of iSAS (3)

■ Higher Productivity

- Return results more quickly in Unix SAS, compared to GPS, for the same SAS job.
- Integrated auto-mail notification function with humanized design, key interest message could be in highlight in the mail message.

■ Scalability and Extensibility

- SAS macro-based design, easier to maintain and implement new features/functions as needed.
- Support customized regular or individualized reports generation automatically and periodically (e.g. weekly or monthly standard monitoring report or status checking report, etc.).
-

What's included in the iSAS package? (Sample)

- Including but not limit to:
 - Frequently used Unix commands (%cd, %lp, %lg)
 - Frequently used Clearcase commands (%ci, %co)
 - Modularized utility macros (%ll, %ld, %lv, %nwords, %freqs, %means)
 - Auto-mail notification service (%mail), with log check included (%chklog)
 - Foreground and background SAS job submission (%rf, %rb)
 - Quick view change as needed (%cv).

Main Interface – Startup

- To startup iSAS in Unix environment for a specific study reporting activity, type the command as follows provided the iSAS environment has been already setup, for example:
 - `isas [STUDY ID]`: will setup the default programming environment in RA `csr_1` for study `[STUDY ID]`
 - `isas “[STUDY ID] csr_1”`: will setup the same programming environment as above but with complete parameters setting

```
[/home/weizh4]
weizh4@chbsux0113>myview
You logged in from phcnzj-wl7501.ap.novartis.net using .profile.v400
NOTE: Personal Aliases and Shortcuts loaded
[/home/weizh4]
weizh4@chbsux0113>isas RL          01█
```

Main Interface – Startup Interface

```
*****
---Current path has been set to /vob/C|                               1/csr_1/pgm/eff---
*****

 1 biomarker_repeated.sas      2 fbp.sas                    3 fbpconf.sas
 4 fcvdth.sas                  5 fwhf.sas                   6 kmcvdth.sas
 7 ldeath1.sas                 8 lexpl.sas                  9 lqsl.sas
10 ltteqsl.sas                 11 lwhf1.sas                 12 lwhf2.sas
13 lwhf3.sas                   14 lzdb.sas                  15 tancoval.sas
16 tbaschg.sas                 17 tbsdmt.h.sas              18 tcox1.sas
19 tcshf.sas                   20 tcvdth.sas                21 teffsub.sas
22 teffwhfsub.sas              23 tgenmod1.sas              24 tkeylos.sas
25 tklosaf.sas                 26 tkmwhf.sas                27 tkshfrf.sas
28 tlogistic1.sas              29 tpcvdth.sas               30 tpdthbp.sas
31 tprbp.sas                   32 tprkey.sas                33 tshift1.sas
34 twhf.sas                    35 twilcox.sas               36 x_tadysppha2a.sas

*****
---End of execution of utility command: CD---
*****

Current Path>>> /vob/C|                               1/csr_1/pgm/eff

NOTE: AUTOEXEC processing completed.

1? █
```


Main Interface – Change View (%cv(zhaochi))

```
*****
---Current view/path has been changed to /view/:                               ./csr_1/pgm/eff---
*****

  1 biomarker_repeated.sas      2 fbp.sas      3 fbpconf.sas
  4 fcvdth.sas                 5 fwhf.sas     6 kmcvdth.sas
  7 ldeath1.log                8 ldeath1.lst  9 ldeath1.sas
 10 lexp1.log                  11 lexp1.lst   12 lexp1.sas
 13 lqs1.log                   14 lqs1.lst    15 lqs1.sas
 16 ltteqs1.log                17 ltteqs1.lst 18 ltteqs1.sas
 19 lwhf1.log                  20 lwhf1.lst   21 lwhf1.sas
 22 lwhf2.log                  23 lwhf2.lst   24 lwhf2.sas
 25 lwhf3.log                  26 lwhf3.lst   27 lwhf3.sas
 28 lzdb.sas                   29 tancoval.log 30 tancoval.lst
 31 tancoval.sas               32 tbschg.sas  33 tbsdmth.sas
 34 tcox1.log                  35 tcox1.lst   36 tcox1.sas
 37 tcshf.sas                  38 tcvdth.sas  39 teffsub.sas
 40 teffwhfsub.sas            41 tgenmod1.log 42 tgenmod1.lst
 43 tgenmod1.sas              44 tkeylos.sas 45 tklosaf.sas
 46 tkmwhf.sas                 47 tkshfrf.sas 48 tlogistic1.log
 49 tlogistic1.lst            50 tlogistic1.sas 51 tpcvdth.sas
 52 tpdthbp.sas               53 tprbp.sas   54 tprkey.sas
 55 tshift1.log               56 tshift1.lst 57 tshift1.sas
 58 twhf.sas                   59 twilcox.sas 60 x_tadysppha2a.sas

*****
---End of execution of utility command: CV---
*****

Current Path>>> /view/:                               ./csr_1/pgm/eff
```

Main Interface – List Programs (%lp)

```
*****
---All programs in current active folder /view/:                               ./csr_1/pgm/eff
*****

  1 biomarker_repeated.sas      2 fbp.sas      3 fbpconf.sas
  4 fcvdth.sas                 5 fwhf.sas     6 kmcvdth.sas
  7 ldeath1.sas                8 lexp1.sas    9 lqsl.sas
 10 ltteqsl.sas               11 lwhf1.sas   12 lwhf2.sas
 13 lwhf3.sas                  14 lzdb.sas    15 tancoval.sas
 16 tbaschg.sas                17 tbsdmth.sas 18 tcox1.sas
 19 tcshf.sas                  20 tcvdth.sas  21 teffsub.sas
 22 teffwhfsub.sas            23 tgenmod1.sas 24 tkeylos.sas
 25 tklosaf.sas                26 tkmwhf.sas  27 tkshfrf.sas
 28 tlogistic1.sas            29 tpcvdth.sas 30 tpdthbp.sas
 31 tprbp.sas                  32 tprkey.sas  33 tshift1.sas
 34 twhf.sas                   35 twilcox.sas 36 x_tadysppha2a.sas

*****
---End of execution of utility command: LP---
*****

Current Path>>> /view/:                               ./csr_1/pgm/eff
```

Main Interface – Job Submission (%rf, %rb)

```
*****
--All programs in current active folder /view/zhai          01/csr_1/
*****
 1 biomarker_repeated.sas      2 fbp.sas                3 fbpconf.sas
 4 fcvdth.sas                  5 fwhf.sas               6 kmcvdth.sas
 7 ldeath1.sas                 8 lexpl.sas              9 lqsl.sas
10 ltteqsl.sas                 11 lwfh1.sas             12 lwfh2.sas
13 lwfh3.sas                   14 lzdb.sas              15 tancoval.sas
16 tbaschg.sas                 17 tbsdmth.sas           18 tcox1.sas
19 tcshf.sas                   20 tcvdth.sas            21 teffsub.sas
22 teffwhfsub.sas              23 tgenmod1.sas          24 tkeylos.sas
25 tklosaf.sas                 26 tkmwhf.sas            27 tkshfrf.sas
28 tlogistic1.sas              29 tpcvdth.sas           30 tpdthbp.sas
31 tprbp.sas                   32 tprkey.sas            33 tshift1.sas
34 twhf.sas                    35 twilcox.sas           36 x_tadysppha2a.sas

*****
--End of execution of utility command: LP--
*****
Current Path>>> /view/zhai          01/csr_1/pgm/eff

11? %rf(1-10)█
```

Main Interface – Log Files (%lg)

```
*****
---All LOG file in current active folder /view/zh:                                01/csr_1/pgm/eff
*****

  1 ldeath1.log          2 lexp1.log            3 lqs1.log
  4 ltteqs1.log         5 lwhf1.log           6 lwhf2.log
  7 lwhf3.log           8 tancoval.log        9 tcox1.log
 10 tgenmod1.log       11 tlogistic1.log     12 tshift1.log

*****
---End of execution of utility command: LG---
*****

Current Path>>> /view/zh: _                                01/csr_1/pgm/eff
```

Main Interface – Log Check (%chklog)

```
*****
---Warning: Potential problems were found in following checked log files.---

/view/zh                                r_1/pgm/eff/ldeath1.log
/view/zh                                r_1/pgm/eff/lexpl1.log
/view/zh                                r_1/pgm/eff/lqs1.log
/view/zh                                r_1/pgm/eff/ltteqs1.log
/view/zh                                r_1/pgm/eff/lwhf1.log
/view/zh                                r_1/pgm/eff/lwhf2.log
/view/zh                                r_1/pgm/eff/lwhf3.log
/view/zh                                r_1/pgm/eff/tancoval1.log
/view/zh                                r_1/pgm/eff/tcox1.log
/view/zh                                r_1/pgm/eff/tgenmod1.log
/view/zh                                r_1/pgm/eff/tlogistic1.log
/view/zh                                r_1/pgm/eff/tshift1.log

---Warning: Please check your mail box for more details.---
*****

---End of CHKLOG macro
```

Main Interface – Log Check (%chklog) with Notification

iSAS Notfcation: SAS programs run with potential problems

weizh4@chbsux0113.eu.novartis.net

发送时间: 2016/2/3 (周三) 17:23

收件人: Wei, Zhijun

保留策略: My Personal Archive (3 年) 过期: 2019/2/2

✉ 邮件

📄 ldeath1.log (88 KB)	📄 lexp1.log (47 KB)	📄 lqs1.log (43 KB)	📄 ltteqs1.log (44 KB)	📄 lwhf1.log (43 KB)
📄 lwhf2.log (51 KB)	📄 lwhf3.log (51 KB)	📄 tancova1.log (48 KB)	📄 tcox1.log (73 KB)	📄 tgenmod1.log (52 KB)
📄 tlogistic1.log (50 KB)	📄 tshift1.log (98 KB)			

Dear zhijun,

Your SAS program runs with potential problems, please see below for your quick reference and attached files for details.

*****/VIEW/ZH[REDACTED]01/CSR_1/PGM/EFF/LDEATH1.LOG*****

000544: WARNING: (U_PREREP: CRE8TF): More than one output file are named the same, example: Critical

000547: WARNING: (U_PREREP: CRE8TF): Please update tracking sheet so all output names are unique

001083: WARNING: (U_PREREP: CRE8TF): More than one output file are named the same, example: Critical

001084: WARNING: (U_PREREP: CRE8TF): Please update tracking sheet so all output names are unique

001625: WARNING: (U_PREREP: CRE8TF): More than one output file are named the same, example: Critical

001626: WARNING: (U_PREREP: CRE8TF): Please update tracking sheet so all output names are unique

-----Location: /view/[REDACTED]pgm/eff/lexp1.log-----

Questions?

