**Evaluation of R11 DEV Global Variables**

**Summary:**

Purpose of evaluating Global Variables in R11 is to determine if, after being migrated from AutoSys v4.5.1 to R11.3.5, Global Variables could be replaced by a R11 process that would mimic the same functionality. Also to check that Global Variables and there Values meet R11 standards.

Each Global Variable was evaluated as to how it was added/updated/deleted from AutoSys and how the Global Variable or its Value was used. If usage warranted replacing the Global Variable with another option, then it was determined what option. Three current Global Variables were found that could be replaced, each with AutoSys Resouce functionality.

**Global Variable R11 Definition:**

Global Variables are assets. These assets are controlled through the sendevent binary which verifies the Global Variable and its Value as it is stored in an AutoSys data base. Global Variables can be added, updated and deleted as they are needed.

Global Variable Name limits are: up to 64 characters in length, valid characters are letters, numbers, period (.), underscore (\_), hyphen (-), hash (#), and space.

Global Variable Value limits are: up to 100 characters.

**Functionality:**

One function of a Global Variable is normally to be created to function as a job dependency. For example, Global Variable ***is\_it\_130***, is set to ‘YES’ when 1:30AM is reached. The Global Variable is then listed in the condition line, v(is\_it\_13) = YES, of jobs that should run only after 1:30AM.

Another function of a Global Variable is to store a ‘value’. Examples of a Global Variables that store a ‘value’ are TDTE and TMRW. Global Variables TDTE and TMRW are updated from the same script, usually every day, at approximately 7:00AM before the daily batch is started. TDTE stores the current date which is then used in other jobs as a parameter and is included as part of the file name for the standard out and error files. The format for the current date in TDTE is YYYYmmdd. The ‘value’ for Global Variable TMRW is current date plus 1 day and the format is dd/mm/YYYY and it is also used as a parameter in other jobs. Another example is of Global Variable ecout001 whose value is used as a unique file name.

OCIO at OSU has another, unique way of using Global Variables. Global Variables are defined and controlled by a script, autosys\_global\_variable, in which a semaphore is used in one of three Global Variables. A semaphore is a variable that provides a process for controlling access of multiple processes to a single resource. This script actually creates a set of 3 Global Variables of which two are stored in the AutoSys data base and the third is kept for internal reference in the script. The function of these Global Variables is to single thread multiple data base update jobs that hit the same table or tables preventing data base locking. Usually this process works well until an incident happens causing the script to fail or the Global Variables becoming ‘out of sync’. When this happens, manual intervention is required to run a special delete process that re-initializes variables in the script so that the three Global Variables can be re-created. Each job that tries to run when the script is down fails.

**Evaluation Results:**

The table listed below contains Global Variables currently in R11 DEV. Under the column heading **Recommendation**, lists recommendations after studying each Global Variable and how they are used.

The only Global Variables that did not meet a coherent naming pattern are the Global Variables being managed by script autosys\_global\_variable. These Global Variables are used both in upper and lower case. If the script was accessing the Global Variable or being used on a condition line, that name is in upper case format. If the Global Variable is used on a command line as a parameter it is used in lower case format.

All R11 Global Variable names and Values meet R11 requirements.

**Recommendations:**

Of the three Global Variables in R11 DEV that are managed by script autosys\_global\_variable, they could be replaced by an AutoSys Global Renewable Resource. The Resource feature is new for R11 and was not available when Global Variables OSR\_SERVIND, SF103OS and SFPGRPST were set up and put into batch production.

**Requirements:**

If the AutoSys Global Renewable Resource were to be used in place of script autosys\_global\_variable the following requirements would need to be met:

* AutoSys Resource Training
* Applicable JOI’s updated with Resource Process
* Testing of changes to validate acceptable results
* Deletion of obsolete jobs
* Resource Naming Standards (might be needed)
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| --- | --- | --- | --- | --- | --- |
| **Global Variable** | **Recommendation** | **How is it a/u/d?** | **Usage** | **Jobs that Add/Update/Delete** | **Jobs that use the Global Variable** |
| 3cengine\_concurrency | Not used –could jobs be deleted? | script  autosys\_global\_variable | Not Used | CVCSoad\_3ceng\_locationcdSIGNIN CVCSoad\_3ceng\_locationcdSIGNOUT |  |
| ADTE | Keep ASIS | script  set\_tmrw.scr | Batch System date | EOD | ACHCEOBD  EMEOBD  HREOBD  BOBEM  BOBFS |
| ecout001 | Keep ASIS | sendevent | Create file name | CVCSecout001inAAPP  CVCSecout001outAAPP  CVCSecout001inACHG  CVCSecout001outACHG |  |
| glh001osOB | Not used – jobs could be deleted | unknown | Not Used except as a job dependency | Not found | BJGLglh141os  CJGLglh141os  CXGLglh001ob  CVGLglh001ob |
| is\_batch\_doneADM | Keep AS IS | sendevent | Used as a job dependency | CVCSbatchendADM  CSDWis\_batch\_doneADM | BGDWadmissionsOWS  BGDWnoncustdepOWS |
| is\_batch\_doneFA | Keep AS IS | sendevent | Used as a job dependency | CVCSbatchendFA  CSDWis\_batch\_doneFA | BGDWfinancialaidOWS |
| is\_batch\_doneSF | Keep AS IS | sendevent | Used as a job dependency | CVCSbatchendSF  CSDWis\_batch\_doneSF | BJDWpf\_sis\_sf |
| is\_batch\_doneSR | Keep AS IS | sendevent | Used as a job dependency | CVCSbatchendSR  CSDWis\_batch\_doneSR | BGDWsrpostbatchOWS |
| is\_it\_130 | Keep AS IS | sendevent | Used as a c job dependency | CVHCwait\_til\_130  CSDWwait\_til\_130 | BGDWadmissionsOWS  BGDWstudentrecordsOWS  BGDWnoncustdepOWS  BGDWsrpostbatchOWS |
| LAST | Keep AS IS | script  set\_tmrw.scr | Parameter for "HR/GL Reconciliation Data Load History Tables- HR" | EOD | CfGLosgl\_loadhr |
| OCC\_BA | Keep AS IS | sendevent | Create file names | CVCSocc\_baCREATE  CVCSocc\_baDELETE | CUCSocc\_ba  CCCSocc\_ba  CZCSocc\_ba  CACSocc\_ba  CDCSocc\_baFTP |
| osf\_sal\_out | Keep AS IS | sendevent | Create file names | CVCSosf\_sal\_outCREATE  CvCSosf\_sal\_outDELETE | CUCSosf\_sal\_out  CCCSosf\_sal\_out  CSCSosf\_sal\_out  CPCSosf\_sal\_out  CACSosf\_sal\_out\_pgp  CDCSosf\_sal\_out |
| OSR\_SERVIND  OSR\_SERVIND\_workdevae\_###### | Could be replaced by Global Renewable Resource | script  autosys\_global\_variable | To single thread data base jobs to prevent data base locking  Used as job dependency | CVCSosr\_servindCREATE  CVCSosr\_servindDELETE  CVCSosr\_servindAEXT  CvCSosr\_servindAEXT  CVCSosr\_servindAHOUSE  CvCSosr\_servindAHOUSE  CVCSosr\_servindALIB  CvCSosr\_servindALIB  CVCSosr\_servindATAP  CvCSosr\_servindATAP  CVCSosr\_servindATRS  CvCSosr\_servindATRS  CVCSosr\_servindREXT  CvCSosr\_servindREXT  CVCSosr\_servindRLIB  CvCSosr\_servindRLIB  CVCSosr\_servindRTAP  CvCSosr\_servindRTAP  CVCSosr\_servindRTRS  CvCSosr\_servindRTRS  CVCSsf103osCHOUSE  CvCSsf103osCHOUSE | BVCSosr\_servindDELETE  CJCSosr\_servindAEXT  CJCSosr\_servindAHOUSE  CJCSosr\_servindALIB  CJCSosr\_servindATAP  CJCSosr\_servindATRS  CJCSosr\_servindREXT  CJCSosr\_servindRLIB  CJCSosr\_servindRTAP  CJCSosr\_servindRTRS |
| osu\_unsigned\_promnotes | Keep AS IS | sendevent | Create file name | CVCSfa121ostxtCREATE\_A  CVCSfa121ostxtDELETE\_A  CVCSfa121ostxtCREATE\_B  CVCSfa121ostxtDELETE\_B | CQCSfa121osA  CACSfa121osA\_zero\_file  CmCSfa121osA  CCCSfa121ostxtA  CUCSfa121ostxtA  CCCSfa121txtA  CZCSfa121txtA  CPCSfa121ostxtA  CDCSfa121ostxtA  CACSfa121ospgpA  CQCSfa121osB  CACSfa121osB\_zero\_file  CmCSfa121osB  CCCSfa121ostxtB  CUCSfa121ostxtB  CCCSfa121txtB  CZCSfa121txtB  CPCSfa121ostxtB  CDCSfa121ostxtB  CACSfa121ospgpB |
| SF103OS  SF103OS\_workdevae\_###### | Could be replaced by Global Renewable Resource | script  autosys\_global\_variable | To single thread data base jobs to prevent data base locking  Used as job dependency | CVCSsf103osCHOUSE  CvCSsf103osCHOUSE  CVCSsf103osCSH  CvCSsf103osCSH  CVCSsf103osCTAP  CvCSsf103osCTAP  CVCSsf103osCUNITS  CvCSsf103osCUNITS  CVCSsf103osCUNITSXORG  CvCSsf103osCUNITSXORG  CVCSsf103osPECSI  CvCSsf103osPECSI  CVCSsf103osPHOUSE  CvCSsf103osPHOUSE  CVCSsf103osPLOCK  CvCSsf103osPLOCK  CVCSsf103osPTAP  CvCSsf103osPTAP  CVCSsf103osCREATE  CVCSsf103osDELETE | CJCSsf103osCHOUSE  CJCSsf103osCSH  CJCSsf103osCTAP  CJCSsf103osCUNITS  CJCSsf103osCUNITSXORG  CJCSsf103osPECSI  CJCSsf103osPHOUSE  CJCSsf103osPLOCK  CJCSsf103osPTAP  BVCSsf103osDELETE  BVCSosr\_servindDELETE |
| SFPGRPST  SFPGRPST\_workdevae\_###### | Could be replaced by Global Renewable Resource  **NOTE: Global Renewable Resource currently being tested** | script  autosys\_global\_variable | To single thread data base jobs to prevent data base locking  Used as job dependency | CVCSsfpgrpstADM  CvCSsfpgrpstADM  CVCSsfpgrpstLATE  CvCSsfpgrpstLATE  CVCSsfpgrpstDED  CvCSsfpgrpstDED  CVCSsfpgrpstSFA  CvCSsfpgrpstSFA  CVCSsfpgrpstSF  CvCSsfpgrpstSF  CVCSsfpgrpstDELETE  CVCSsfpgrpstCREATE | CJCSsfpgrpstADM  CJCSsfpgrpstLATE  CJCSsfpgrpstDED  CJCSsfpgrpstSFA  CJCSsfpgrpstSF |
| TDClient\_pw | Keep AS IS | sendevent | Updates TDClient password | CVCS\_chk\_TDClient\_pw  CvCS\_chk\_TDClient\_pw | CPCS\_chk\_TDClient\_pw  CCCS\_chk\_TDClient\_pw |
| TDTE | Keep AS IS | script  set\_tmrw.scr | Batch System date  Currently on all std\_out/err  Is a parameter in jobs | EOD | ACHCEOBD  EMEOBD  HREOBD  BOBEM  BOBFS |
| TMRW | Keep AS IS | script  set\_tmrw.scr | Batch System date  Is a parameter in the following jobs | EOD | EODdwSAT  EODerSAT  EODfsSAT  EODdwTST  EODemTST  EODemSAT  EODfsTST  EODdw  EODem  EODfs |
| YEST | NOT used – script could be updated to remove YEST | script  set\_tmrw.scr | Batch System date  Not used anywhere | EOD |  |