

Accessing more than 1.0 of data on AIX

This section describes necessary settings to get access to more than 1.0 GB on AIX for allocations of data within a V5 process.

Background

By default, Version 5 processes on AIX can allocate up to 1.0 GB. It is possible to override the default allocation capabilities up to 2.0 GB. Such a capability requires additional tunings in order to be effective :

- From an operating system standpoint
- From a Version 5 standpoint

Operating System required customizations

To get access to more than 1.0 GB for allocating data, the X server must be configured to use extended shared memory. To enable this support, do the following :

1. Modify `/usr/lpp/X11/defaults/xserverrc` shell script to add :
EXTSHM=ON
export EXTSHM
before execution of the X process in the shell script (for example, just before environment variable EXTENSIONS is set in the shell script).
2. Reboot workstation or restart the X server to take modification into account

Version 5 required customizations

The capability to allocate more than 1.0 GB on AIX is controlled by a new environment variable : V5MEM. This environment variable can take an integer value from 5 to 8, and controls the number of 256 MB segments that Version 5 can allocate. By default, this environment variable is not set. When set, the environment variable is checked by `catstart` shell script, which will set the environment accordingly.

- When V5MEM is not set, Version 5 will be able to allocate up to 1.0 GB (operating system customizations are not required)
- When V5MEM is set, operating system customizations are required; V5MEM=5 will give access to 1.25 GB; V5MEM=8 will give access to 2.0 GB of address space for data allocated during the Version 5 session. In all cases, it is recommended to have the paging space sized accordingly.

Additional Operating System considerations

- When operating in a Japanese environment, setting of the environment on AIX 4.3 requires PTF for APAR IY30921 (PTF for APAR IY31016 on AIX 5.1)
- When operating on a GXT4000P or GXT6000P, PTF for APAR IY18593 is required (on these graphic adapters, the X server will fail to start when EXTSHM=ON is added to `/usr/lpp/X11/defaults/xserverrc`).

- One cannot execute a Version 5 session with V5MEM set simultaneously with another Version 5 session for which V5MEM is not set. When several sessions need to run simultaneously on the same workstation, they should share the same V5MEM setting, or be executed with V5MEM unset.