Installing Adabas Parallel Services

It is important to review the entire installation procedure before starting the physical installation. Depending on which components you actually install, it may be useful to group certain installation activities together, even though they may not be in the same installation section.

Read the current version of the *Release Notes* for specific information about late changes to this document.

The installation is described under the following headings:

- Prerequisites
- Using System Maintenance Aid
- OS/390 and z/OS Systems Installation
- VSE/ESA Systems Installation
- BS2000/OSD Systems Installation

Prerequisites

This document covers the following topics:

- Required Operating Environment
- Prerequisite Software

Required Operating Environment

Adabas Parallel Services version 7.5 requires one of the following operating systems:

- OS/390 *or* z/OS *or* z/OS.e
- VSE/ESA
- BS2000

Read the current version of the *Release Notes* for information about supported versions and release levels.

Prerequisite Software

Adabas 7.4 is a prerequisite for using Adabas Parallel Services version 7.5. Adabas must be installed and operational on your system before you install Adabas Parallel Services.

- Use ADADEF to define a new version 7.4 database.
- Use ADACNV to convert an existing database from an earlier version. Protection logs (PLOGs) and Work data sets must then be reformatted in version 7.4.

- BS2000/OSD systems require that the IDT common memory pool be started by Adabas version 7.4 or above.

To install Adabas version 7.4, see your Adabas Installation documentation delivered with the product.

Using System Maintenance Aid

If you use Software AG's System Maintenance Aid (SMA), refer to the System Maintenance Aid documentation for information about the installation process.

The installation procedures described in this section correspond to the jobs that SMA creates to install the product.

If you do not use SMA, you can modify and use the sample JCL provided to unload the Adabas Parallel Services libraries from the installation tape.

OS/390 and z/OS Systems Installation

This section describes the preparation for and installation of Adabas Parallel Services on z/OS and OS/390 systems.

Important:
Before proceeding with the installation, ensure that the prerequisite environment has been established. Review the earlier sections of this part of the documentation for detailed information.

The installation procedure outlined in this section corresponds to the jobs that SMA creates to install the product. If you do not use SMA, you can modify and use the sample JCL provided in section *Unload the Installation Libraries to Disk* to unload the libraries from the installation tape.

1. Copy the Adabas Parallel Services installation data sets from tape to disk.

2. APF-authorize all load libraries used for the ADACOM initialization task and the Parallel Services nuclei.

3. Customize the ADACOM parameters as necessary.

4. Create a startup procedure to execute the ADACOM initialization task. You may optionally set up ADACOM to execute automatically at IPL time.

   Ensure that all libraries in the STEPLIB concatenation of the ADACOM startup procedure are APF-authorized.

5. For each Adabas Parallel Services cluster nucleus, customize the appropriate startup parameters and execute the ADARUN module from the Adabas 7.4 load library.

   Ensure that all libraries in the STEPLIB concatenation of the Adabas Parallel Services startup procedure are APF-authorized.

6. Start Adabas Parallel Services.

- Step 1: Unload the Installation Libraries to Disk
- Step 2: APF-Authorize All Load Libraries
- Step 3: Customize ADACOM
- Step 4: Create a Startup Procedure for ADACOM
- Step 5: Create a Startup Procedure for Each Cluster Nucleus
- Step 6: Start ADABAS Parallel Services

Step 1: Unload the Installation Libraries to Disk

Sample JCL is provided in the base Adabas 7.4 source library. This JCL can be modified and used to unload the Adabas Parallel Services libraries from the installation tape.

The Adabas Parallel Services installation tape is a standard label tape. Refer to the *Report of Tape Creation* that accompanies the tape for the volume serial number, density, media type, data set names, and data set sequence numbers.

The tape contains the installation data sets, a data set required by SMA, and one or more data sets containing maintenance fixes. Refer to the *Release Notes* for information about recommended fixes.

1. Allocate DASD.

   The load library for Adabas Parallel Services requires one cylinder.

2. Copy the contents of the tape to disk.

   To copy the Adabas Parallel Services data sets from the installation tape, use JCL similar to the following:

```
//COPY     JOB . . . .
//*
//*     Adabas Parallel Services Load Library
//*
//CPY1    EXEC PGM=IEBCOPY
//SYSPRINT DD SYSOUT=*
//DDIN     DD DSN=ASMvrs.LOAD,DISP=OLD,UNIT=TAPE,
//            VOL=(,RETAIN,SER=volser),LABEL=n
//DDOUT    DD DSN=ASM.Vvrs.LOAD,DISP=(NEW,CATLG,DELETE),
//            UNIT=xxxxx,VOL=SER=vvvvvv,SPACE=(CYL,(cc,,bl))
//SYSIN    DD *
 COPY INDD=DDIN,OUTDD=DDOUT
/*
```

   where:

bl	number of directory blocks for this library
cc	number of cylinders for this library
vrs	product version, revision, and system maintenance (SM) level
volser	volume serial number for the installation tape
n	position of the data set on the installation tape
ASM	product code for Adabas Parallel Services
vvvvvv	volume serial number of the disk used for the specified library
xxxxx	DASD device type

Copy the contents of the tape to disk.

To copy the Adabas Parallel Services data sets from the installation tape, use JCL similar to the following:

```
//COPY     JOB . . . .
//*
//*     Adabas Parallel Services Load Library
//*
//CPY1    EXEC PGM=IEBCOPY
//SYSPRINT DD SYSOUT=*
//DDIN     DD DSN=ASMvrs.LOAD,DISP=OLD,UNIT=TAPE,
//            VOL=(,RETAIN,SER=volser),LABEL=n
//DDOUT    DD DSN=ASM.Vvrs.LOAD,DISP=(NEW,CATLG,DELETE),
//            UNIT=xxxxx,VOL=SER=vvvvvv,SPACE=(CYL,(cc,,bl))
//SYSIN    DD *
 COPY INDD=DDIN,OUTDD=DDOUT
/*
```

where:

bl	number of directory blocks for this library
cc	number of cylinders for this library
vrs	product version, revision, and system maintenance (SM) level
volser	volume serial number for the installation tape
n	position of the data set on the installation tape
ASM	product code for Adabas Parallel Services
vvvvvv	volume serial number of the disk used for the specified library
xxxxx	DASD device type

Step 2: APF-Authorize All Load Libraries

Ensure that Adabas Parallel Services runs authorized.

To run authorized, the Adabas Parallel Services and Adabas version 7.4 load libraries and all other load libraries in the STEPLIB concatenation must be APF-authorized.

- Ensure that all load libraries referenced in the STEPLIB concatenation for your ADACOM and cluster nuclei startup procedures are defined to the operating system as authorized libraries. If this is not done, ADACOM or the cluster nuclei will not initialize and may abnormally terminate, usually with an ABENDS047, ABENDS306, or ABENDS0C1.

  Either copy the base Adabas modules and the Adabas Parallel Services modules to an existing APF-authorized library or APF-authorize the Adabas Parallel Services library that was unloaded from the installation tape and the Adabas 7.4 load library unloaded from the base Adabas installation tape.

Step 3: Customize ADACOM

- Make any needed additions and modifications to the ADACOM member.

  Read *ADACOM Initialization Parameters* for more information about specifying values for ADACOM parameters.

Step 4: Create a Startup Procedure for ADACOM

An ADACOM initialization task is provided. This task must be active on the operating system image before any Adabas Parallel Services cluster nucleus is started.

ADACOM allocates the nucleus table for monitoring the active nuclei and the user table for monitoring users in the extended CSA (ECSA) above the 16MB line.

- The following is a sample job for running ADACOM:

```
//ADACOM PROC
//*-------------------------------------------------------------*
//*     ADABAS PARALLEL SERVICES ADACOM Vv.r.s STARTUP          *
//*-------------------------------------------------------------*
//ASMvrs EXEC PGM=ADARUN,REGION=4M,TIME=1440
//STEPLIB  DD DISP=SHR,DSN=ADABAS.Vvrs.LOAD
//*
//COMPRINT DD SYSOUT=*
//DDCARD DD *
ADARUN PROGRAM=ADACOM
/*
//DDKARTE DD *
ADACOM SVC=sv1,DBID=dbid1,NU=150
ADACOM SVC=sv1,DBID=dbid2,NU=150,F=Y
ADACOM SVC=sv2,DBID=dbid1,NU=500
ADACOM SVC=sv2,DBID=dbid3,NU=500
/*
```

  The COMPRINT DD statement must be specified when running ADACOM. It defines an output data set for all general messages printed by ADACOM. For each SVC/DBID set specified in the ADACOM task, a subtask is attached and a SYSOUT data set is dynamically allocated to receive all messages specific to that combination.

  You may also want to add the ADACOM task’s start command to member COMMNDxx of SYS1.PARMLIB; this enables the ADACOM task to begin automatically at IPL.

Step 5: Create a Startup Procedure for Each Cluster Nucleus

1. Customize a startup procedure to execute ADARUN.

   For each Adabas cluster nucleus, customize the appropriate startup parameters and execute ADARUN from the Adabas 7.4 load library.

2. Concatenate the Adabas Parallel Services load library ahead of the Adabas 7.4 load library in the STEPLIB.

3. Allocate and format a Work data set for each nucleus.

   All nuclei in an Adabas Parallel Services cluster share a common database resource; i.e., the same ASSO and DATA data sets. Each nucleus in the cluster must have its own Work data set; and all Work data sets within a cluster must have the same size and device type as defined in the general control block (GCB).

   Use DISP=SHR on the DD card for the Work data set (DDWORKR1). During an offline or online restart/recovery, a nucleus may access the Work data sets belonging to other nuclei in the cluster.

4. Specify for each nucleus the ADARUN parameters `CLUSTER`, `NUCID`, `CLUCACHETYPE`, `CLUCACHESIZE`, `CLULOCKSIZE`.

   Although each nucleus of an Adabas cluster shares the same database resource (DBID), each nucleus must have a unique NUCID value:

   - a single (noncluster) nucleus: NUCID=0 (default)
   - a cluster nucleus: NUCID=1-65000

   Values for the `CLUCACHESIZE` and `CLULOCKSIZE` parameters are required for allocating the global data spaces. Read *Performance and Tuning* for sizing recommendations.

   Use current values for all other ADARUN parameters, then reevaluate the values after monitoring the result. Ensure that each nucleus in the cluster is prepared to handle the entire workload for the common database, if necessary.

5. If protection logs are used, they must be dual or multiple logs and each nucleus must have its own. If one nucleus in the cluster runs with PLOGs, all nuclei in the cluster must run with PLOGs. The ADARUN `PLOGRQ` parameter must be the same for all nuclei (global parameter).

   If user exit 2 or user exit 12 is supplied for one nucleus, the same user exit must be supplied for all nuclei in the cluster. User exit 12 must be used instead of user exit 2 if NCLOG/NPLOG is specified.

6. If command logs are used, each nucleus must have its own. If command logs are to be merged, they must be dual or multiple command logs and each nucleus in the cluster must have the same CLOG definition. To invoke automatic CLOG merging, CLOGMRG=YES must be specified in the ADARUN parameters or given as an operator or AOS/ADADBS command to any nucleus in the cluster.

7. The following sample JCL (job ASMNUC in the MVSJOBS data set) executes the Adabas ADARUN program to implement session parameters for an Adabas Parallel Services cluster nucleus.

Note that the Adabas Parallel Services library is concatenated ahead of the Adabas library in the STEPLIB.

```
//ADANUC    JOB   MSGCLASS=X,TIME=1440
//*-------------------------------------------------------
//*   THIS IS A STARTUP JOB FOR A PARALLEL SERVICES NUCLEUS
//*
//*   THE ADARUN PARMS HAVE TO BE CUSTOMIZED
//*   DEPENDING ON THE USER'S ENVIRONMENT
//*   DETAILS ARE PROVIDED IN THE OPERATIONS MANUAL
//*-------------------------------------------------------
//NUC      EXEC
PGM=ADARUN

,REGION=3072K
//STEPLIB   DD   DISP=SHR,DSN=ASM.VVRS.LOAD        <=== ASM LOAD
//          DD   DISP=SHR,DSN=ADABAS.VVRS.LOAD     <=== ADABAS LOAD
//DDASSOR1  DD   DISP=SHR,DSN=EXAMPL.DBYYY.ASSOR1  <=== ASSO
//DDDATAR1  DD   DISP=SHR,DSN=EXAMPL.DBYYY.DATAR1  <=== DATA
//DDWORKR1  DD   DISP=SHR,DSN=EXAMPL.DBYYY.WORKR1  <=== WORK
//DDPLOGR1  DD   DISP=SHR,DSN=EXAMPL.DBYYY.PLOGR1  <=== PLOG1
//DDPLOGR2  DD   DISP=SHR,DSN=EXAMPL.DBYYY.PLOGR2  <=== PLOG2
//DDDRUCK   DD   SYSOUT=X
//DDPRINT   DD   SYSOUT=X
//MPMDUMP   DD   SYSOUT=X
//DDCARD    DD   *
ADARUN PROG=ADANUC
ADARUN CLUSTER=LOCAL
ADARUN MODE=MULTI
ADARUN SVC=SSS               <--- INSERT YOUR SVC NUMBER
ADARUN DBID=YYY              <--- INSERT YOUR DATABASE ID
ADARUN NUCID=NNNNN

          <--- INSERT YOUR NUCLEUS ID
ADARUN CLUCACHESIZE=XXXXXXXX <--- INSERT YOUR CACHE SIZE
ADARUN CLULOCKSIZE=XXXXXXXX  <--- INSERT YOUR LOCK SIZE
ADARUN DEVICE=3390
ADARUN CT=60
ADARUN OPENRQ=NO             ---> DEFAULT = YES
ADARUN PLOGRQ=NO             ---> DEFAULT = YES
ADARUN LBP=900000
ADARUN LFIOP=300000
ADARUN LCP=10000
ADARUN LFP=12000
ADARUN LWP=350000
ADARUN LI=10000
ADARUN LS=20000
ADARUN LU=65535
ADARUN LP=1500
ADARUN NAB=16
ADARUN NISNHQ=1000           ---> FOR BATCH NATURAL INPL
ADARUN NT=8
ADARUN TT=600
ADARUN TNAA=600
ADARUN TNAE=600
ADARUN TLSCMD=300
ADARUN DUALPLS=6750          ---> 50 CYL
ADARUN DUALPLD=3390
ADARUN LOGGING=NO
/*
```

Concatenate the Adabas Parallel Services load library ahead of the Adabas 7.4 load library in the STEPLIB.

Allocate and format a Work data set for each nucleus.

All nuclei in an Adabas Parallel Services cluster share a common database resource; i.e., the same ASSO and DATA data sets. Each nucleus in the cluster must have its own Work data set; and all Work data sets within a cluster must have the same size and device type as defined in the general control block (GCB).

Use DISP=SHR on the DD card for the Work data set (DDWORKR1). During an offline or online restart/recovery, a nucleus may access the Work data sets belonging to other nuclei in the cluster.

Specify for each nucleus the ADARUN parameters `CLUSTER`, `NUCID`, `CLUCACHETYPE`, `CLUCACHESIZE`, `CLULOCKSIZE`.

Although each nucleus of an Adabas cluster shares the same database resource (DBID), each nucleus must have a unique NUCID value:

- a single (noncluster) nucleus: NUCID=0 (default)
- a cluster nucleus: NUCID=1-65000

Values for the `CLUCACHESIZE` and `CLULOCKSIZE` parameters are required for allocating the global data spaces. Read *Performance and Tuning* for sizing recommendations.

Use current values for all other ADARUN parameters, then reevaluate the values after monitoring the result. Ensure that each nucleus in the cluster is prepared to handle the entire workload for the common database, if necessary.

If protection logs are used, they must be dual or multiple logs and each nucleus must have its own. If one nucleus in the cluster runs with PLOGs, all nuclei in the cluster must run with PLOGs. The ADARUN `PLOGRQ` parameter must be the same for all nuclei (global parameter).

If user exit 2 or user exit 12 is supplied for one nucleus, the same user exit must be supplied for all nuclei in the cluster. User exit 12 must be used instead of user exit 2 if NCLOG/NPLOG is specified.

If command logs are used, each nucleus must have its own. If command logs are to be merged, they must be dual or multiple command logs and each nucleus in the cluster must have the same CLOG definition. To invoke automatic CLOG merging, CLOGMRG=YES must be specified in the ADARUN parameters or given as an operator or AOS/ADADBS command to any nucleus in the cluster.

The following sample JCL (job ASMNUC in the MVSJOBS data set) executes the Adabas ADARUN program to implement session parameters for an Adabas Parallel Services cluster nucleus.

Note that the Adabas Parallel Services library is concatenated ahead of the Adabas library in the STEPLIB.

```
//ADANUC    JOB   MSGCLASS=X,TIME=1440
//*-------------------------------------------------------
//*   THIS IS A STARTUP JOB FOR A PARALLEL SERVICES NUCLEUS
//*
//*   THE ADARUN PARMS HAVE TO BE CUSTOMIZED
//*   DEPENDING ON THE USER'S ENVIRONMENT
//*   DETAILS ARE PROVIDED IN THE OPERATIONS MANUAL
//*-------------------------------------------------------
```

```
//NUC      EXEC
PGM=ADARUN

,REGION=3072K
//STEPLIB   DD   DISP=SHR,DSN=ASM.VVRS.LOAD        <=== ASM LOAD
//          DD   DISP=SHR,DSN=ADABAS.VVRS.LOAD     <=== ADABAS LOAD
//DDASSOR1  DD   DISP=SHR,DSN=EXAMPL.DBYYY.ASSOR1  <=== ASSO
//DDDATAR1  DD   DISP=SHR,DSN=EXAMPL.DBYYY.DATAR1  <=== DATA
//DDWORKR1  DD   DISP=SHR,DSN=EXAMPL.DBYYY.WORKR1  <=== WORK
//DDPLOGR1  DD   DISP=SHR,DSN=EXAMPL.DBYYY.PLOGR1  <=== PLOG1
//DDPLOGR2  DD   DISP=SHR,DSN=EXAMPL.DBYYY.PLOGR2  <=== PLOG2
//DDDRUCK   DD   SYSOUT=X
//DDPRINT   DD   SYSOUT=X
//MPMDUMP   DD   SYSOUT=X
//DDCARD    DD   *
ADARUN PROG=ADANUC
ADARUN CLUSTER=LOCAL
ADARUN MODE=MULTI
ADARUN SVC=SSS               <--- INSERT YOUR SVC NUMBER
ADARUN DBID=YYY              <--- INSERT YOUR DATABASE ID
ADARUN NUCID=NNNNN

          <--- INSERT YOUR NUCLEUS ID
ADARUN CLUCACHESIZE=XXXXXXXX <--- INSERT YOUR CACHE SIZE
ADARUN CLULOCKSIZE=XXXXXXXX  <--- INSERT YOUR LOCK SIZE
ADARUN DEVICE=3390
ADARUN CT=60
ADARUN OPENRQ=NO             ---> DEFAULT = YES
ADARUN PLOGRQ=NO             ---> DEFAULT = YES
ADARUN LBP=900000
ADARUN LFIOP=300000
ADARUN LCP=10000
ADARUN LFP=12000
ADARUN LWP=350000
ADARUN LI=10000
ADARUN LS=20000
ADARUN LU=65535
ADARUN LP=1500
ADARUN NAB=16
ADARUN NISNHQ=1000           ---> FOR BATCH NATURAL INPL
ADARUN NT=8
ADARUN TT=600
ADARUN TNAA=600
ADARUN TNAE=600
ADARUN TLSCMD=300
ADARUN DUALPLS=6750          ---> 50 CYL
ADARUN DUALPLD=3390
ADARUN LOGGING=NO
/*
```

Step 6: Start ADABAS Parallel Services

1. Start the ADACOM initialization task on the operating system image that is hosting the Adabas Parallel Services cluster environment.

2. Start the Adabas Parallel Services cluster nuclei in any order.

   The Adabas Parallel Services cluster is now ready to process user requests.

Rules for subsequent starts of Adabas Parallel Services are described in *Adabas Parallel Services Operations*.

Start the Adabas Parallel Services cluster nuclei in any order.

The Adabas Parallel Services cluster is now ready to process user requests.

Rules for subsequent starts of Adabas Parallel Services are described in *Adabas Parallel Services Operations*.

VSE/ESA Systems Installation

This section describes the preparation for and installation of Adabas Parallel Services on VSE/ESA systems.

The installation procedure outlined in this section corresponds to the jobs that SMA creates to install the product. If you do not use SMA, you can modify and use the sample JCL provided in section *1. Unload the Installation Libraries to Disk* of the OS/390 and z/OS systems installation to unload the libraries from the installation tape.

1. Install the Adabas Parallel Services library
2. Customize the ADACOM parameters as necessary.
3. Create a startup procedure to execute the ADACOM initialization task. You may optionally set up ADACOM to execute automatically at IPL time.
4. For each Adabas Parallel Services cluster nucleus, customize the appropriate startup parameters and execute the ADARUN module from the Adabas 7.4 load library.
5. Start Adabas Parallel Services.

Step 1: Install the Adabas Parallel Services Library

1. Define the Sublibrary

   Adabas Parallel Services users must define an additional sublibrary in the Adabas library for the Adabas Parallel Services components.

   A sample job to accomplish this is as follows:

```
// JOB ASMDEF DEFINE NON-VSAM SUBLIB
// OPTION LOG
// DLBL SAGLIB,'ADABAS.Vvrs.LIBRARY',2099/365,SD
// EXTENT SYS010
// ASSGN SYS010,DISK,VOL=vvvvvv,SHR
// EXEC LIBR
DEFINE S=SAGLIB.ASMvrs REUSE=AUTO R=Y
LD L=SAGLIB OUTPUT=STATUS
/*
/&
```

where

SYS010	is the logical unit for the Adabas library
vvvvvv	is the volume for the Adabas library
vrs	is the Adabas version/revision/system maintenance (SM) level

2. Restore the Adabas Parallel Services Sublibrary

   A sample job to restore the Adabas Parallel Services components is as follows:

```
// JOB ASMRST RESTORE NON-VSAM
// OPTION LOG
// ASSGN SYS006,cuu
// PAUSE MOUNT ADABAS INSTALL TAPE cuu
// MTC REW,SYS006
// MTC FSF,SYS006,tt
// DLBL SAGLIB,'ADABAS.Vvrs.LIBRARY'
// EXTENT SYS010
// ASSGN SYS010,DISK,VOL=vvvvvv,SHR
// EXEC LIBR
RESTORE SUB=SAGLIB.ASMvrs -
TAPE=SYS006 LIST=Y R=Y
LD SUB=SAGLIB.ASMvrs OUTPUT=NORMAL
/*
// MTC REW,SYS006
/&
```

   where

SAGLIB	is the Adabas library name
SYS010	is the logical unit for the Adabas library
SYS006	is the Adabas installation tape
cuu	is the physical unit address of the tape drive
tt	is the number of tape marks to space forward (see the *Report of Tape Creation*)
vvvvvv	is the volume for the Adabas library
vrs	is the Adabas version/revision/system maintenance (SM) level

Restore the Adabas Parallel Services Sublibrary

A sample job to restore the Adabas Parallel Services components is as follows:

```
// JOB ASMRST RESTORE NON-VSAM
// OPTION LOG
// ASSGN SYS006,cuu
// PAUSE MOUNT ADABAS INSTALL TAPE cuu
// MTC REW,SYS006
// MTC FSF,SYS006,tt
// DLBL SAGLIB,'ADABAS.Vvrs.LIBRARY'
// EXTENT SYS010
// ASSGN SYS010,DISK,VOL=vvvvvv,SHR
// EXEC LIBR
```

```
RESTORE SUB=SAGLIB.ASMvrs -
TAPE=SYS006 LIST=Y R=Y
LD SUB=SAGLIB.ASMvrs OUTPUT=NORMAL
/*
// MTC REW,SYS006
/&
```

where

SAGLIB	is the Adabas library name
SYS010	is the logical unit for the Adabas library
SYS006	is the Adabas installation tape
cuu	is the physical unit address of the tape drive
tt	is the number of tape marks to space forward (see the *Report of Tape Creation*)
vvvvvv	is the volume for the Adabas library
vrs	is the Adabas version/revision/system maintenance (SM) level

Step 2: Customize ADACOM

- Make any needed additions and modifications to the ADACOM member.

  Read *ADACOM Initialization Parameters* for more information about specifying values for ADACOM parameters.

Step 3: Create a Startup Procedure for ADACOM

An ADACOM initialization task is provided. This task must be active on the operating system image before any Adabas Parallel Services cluster nucleus is started.

ADACOM allocates the nucleus table for monitoring the active nuclei and the user table for monitoring users in the SVA above the 16MB line.

- The following is a sample job for running ADACOM:

```
// JOB ADACOM
//*-------------------------------------------------------------*
//*     ADABAS PARALLEL SERVICES ADACOM Vv.r.s STARTUP          *
//*-------------------------------------------------------------*
// LIBDEF PHASE,SEARCH=(SAGLIB.ASM742,SAGLIB.ADA742)
// EXEC ADARUN,SIZE=ADARUN
ADARUN PROG=ADACOM
/*
ADACOM SVC=sv1,DBID=dbid1,NU=150
ADACOM SVC=sv1,DBID=dbid2,NU=150,F=Y
ADACOM SVC=sv2,DBID=dbid1,NU=500
ADACOM SVC=sv2,DBID=dbid3,NU=500
/*
/&
```

Note:
ADACOM must run in a dynamic partition.

Step 4: Create a Startup Procedure for Each Cluster Nucleus

1. Customize a startup procedure to execute ADARUN.

   For each Adabas cluster nucleus, customize the appropriate startup parameters and execute ADARUN from the Adabas 7.4 load library.

   Note:
   Each Adabas cluster nucleus must run in a dynamic partition.

2. Concatenate the Adabas Parallel Services load library ahead of the Adabas 7.4 load library in the LIBDEF PHASE SEARCH statement.

3. Allocate and format a Work data set for each nucleus.

   All nuclei in an Adabas Parallel Services cluster share a common database resource; i.e., the same ASSO and DATA data sets. Each nucleus in the cluster must have its own Work data set; and all Work data sets within a cluster must have the same size and device type as defined in the general control block (GCB).

4. 4. Specify for each nucleus the ADARUN parameters `CLUSTER`, `NUCID`, `CLUCACHESIZE`, `CLULOCKSIZE`.

   Although each nucleus of an Adabas cluster shares the same database resource (DBID), each nucleus must have a unique NUCID value:

   - a single (noncluster) nucleus: NUCID=0 (default)
   - a cluster nucleus: NUCID=1-65000

   Values for the `CLUCACHESIZE` and `CLULOCKSIZE` parameters are required for allocating the global data spaces. Read *Performance and Tuning*.

   Use current values for all other ADARUN parameters, then reevaluate the values after monitoring the result. Ensure that each nucleus in the cluster is prepared to handle the entire workload for the common database, if necessary.

5. If protection logs are used, they must be dual or multiple logs and each nucleus must have its own. If one nucleus in the cluster runs with PLOGs, all nuclei in the cluster must run with PLOGs. The ADARUN `PLOGRQ` parameter must be the same for all nuclei (global parameter). If user exit 2 or user exit 12 is supplied for one nucleus, the same user exit must be supplied for all nuclei in the cluster.

6. If command logs are used, each nucleus must have its own. If command logs are to be merged, they must be dual or multiple command logs and each nucleus in the cluster must have the same CLOG definition. To invoke automatic CLOG merging, CLOGMRG=YES must be specified in the ADARUN parameters or given as an operator or AOS/ADADBS command to any nucleus in the cluster.

The following sample JCL executes the Adabas ADARUN program to implement session parameters for an Adabas Parallel Services cluster nucleus.

Note:
The Adabas Parallel Services library is concatenated ahead of the Adabas library in the LIBDEF PHASE SEARCH statement.

```
// JOB ADANUC
//*-------------------------------------------------------
//*   THIS IS A STARTUP JOB FOR A PARALLEL SERVICES NUCLEUS
//*
//*   THE ADARUN PARMS HAVE TO BE CUSTOMIZED
//*   DEPENDING ON THE USER'S ENVIRONMENT
//*   DETAILS ARE PROVIDED IN THE OPERATIONS MANUAL
//*-------------------------------------------------------
// LIBDEF PHASE,SEARCH=(SAGLIB.ASM742,SAGLIB.ADA742)
// DLBL ASSOR1,'EXAMPL.DBYYY.ASSOR1'
// EXTENT SYS020
// DLBL DATAR1,'EXAMPL.DBYYY.DATAR1'
// EXTENT SYS021
// DLBL WORKR1,'EXAMPL.DBYYY.WORKR1'
// EXTENT SYS022
// DLBL PLOGR1,'EXAMPL.DBYYY.PLOGR1'
// EXTENT SYS027
// DLBL PLOGR2,'EXAMPL.DBYYY.PLOGR2'
// EXTENT SYS028
// ASSGN SYS009,PRINTER
// EXEC ADARUN,SIZE=ADARUN
ADARUN PROG=ADANUC
ADARUN CLUSTER=LOCAL
ADARUN MODE=MULTI
ADARUN SVC=SSS               <--- INSERT YOUR SVC NUMBER
ADARUN DBID=YYY              <--- INSERT YOUR DATABASE ID
ADARUN NUCID=NNNNN           <--- INSERT YOUR NUCLEUS ID
ADARUN CLUCACHESIZE=XXXXXXXX <--- INSERT YOUR CACHE SIZE
ADARUN CLULOCKSIZE=XXXXXXXX  <--- INSERT YOUR LOCK SIZE
ADARUN DEVICE=3390
ADARUN CT=60
ADARUN OPENRQ=NO             ---> DEFAULT = YES
ADARUN PLOGRQ=NO             ---> DEFAULT = YES
ADARUN LBP=900000
ADARUN LFIOP=300000
ADARUN LCP=10000
ADARUN LFP=12000
ADARUN LWP=350000
ADARUN LI=10000
ADARUN LS=20000
ADARUN LU=65535
ADARUN LP=1500
ADARUN NAB=16
ADARUN NISNHQ=1000           ---> FOR BATCH NATURAL INPL
ADARUN NT=8
ADARUN TT=600
ADARUN TNAA=600
ADARUN TNAE=600
ADARUN TLSCMD=300
ADARUN DUALPLS=6750          ---> 50 CYL
ADARUN DUALPLD=3390
ADARUN LOGGING=NO
/*
/&
```

Concatenate the Adabas Parallel Services load library ahead of the Adabas 7.4 load library in the LIBDEF PHASE SEARCH statement.

Allocate and format a Work data set for each nucleus.

All nuclei in an Adabas Parallel Services cluster share a common database resource; i.e., the same ASSO and DATA data sets. Each nucleus in the cluster must have its own Work data set; and all Work data sets within a cluster must have the same size and device type as defined in the general control block (GCB).

4. Specify for each nucleus the ADARUN parameters `CLUSTER`, `NUCID`, `CLUCACHESIZE`, `CLULOCKSIZE`.

Although each nucleus of an Adabas cluster shares the same database resource (DBID), each nucleus must have a unique NUCID value:

- a single (noncluster) nucleus: NUCID=0 (default)
- a cluster nucleus: NUCID=1-65000

Values for the `CLUCACHESIZE` and `CLULOCKSIZE` parameters are required for allocating the global data spaces. Read *Performance and Tuning*.

Use current values for all other ADARUN parameters, then reevaluate the values after monitoring the result. Ensure that each nucleus in the cluster is prepared to handle the entire workload for the common database, if necessary.

If protection logs are used, they must be dual or multiple logs and each nucleus must have its own. If one nucleus in the cluster runs with PLOGs, all nuclei in the cluster must run with PLOGs. The ADARUN `PLOGRQ` parameter must be the same for all nuclei (global parameter). If user exit 2 or user exit 12 is supplied for one nucleus, the same user exit must be supplied for all nuclei in the cluster.

If command logs are used, each nucleus must have its own. If command logs are to be merged, they must be dual or multiple command logs and each nucleus in the cluster must have the same CLOG definition. To invoke automatic CLOG merging, CLOGMRG=YES must be specified in the ADARUN parameters or given as an operator or AOS/ADADBS command to any nucleus in the cluster.

The following sample JCL executes the Adabas ADARUN program to implement session parameters for an Adabas Parallel Services cluster nucleus.

Note:
The Adabas Parallel Services library is concatenated ahead of the Adabas library in the LIBDEF PHASE SEARCH statement.

```
// JOB ADANUC
//*-------------------------------------------------------
//*   THIS IS A STARTUP JOB FOR A PARALLEL SERVICES NUCLEUS
//*
//*   THE ADARUN PARMS HAVE TO BE CUSTOMIZED
//*   DEPENDING ON THE USER'S ENVIRONMENT
//*   DETAILS ARE PROVIDED IN THE OPERATIONS MANUAL
//*-------------------------------------------------------
// LIBDEF PHASE,SEARCH=(SAGLIB.ASM742,SAGLIB.ADA742)
// DLBL ASSOR1,'EXAMPL.DBYYY.ASSOR1'
// EXTENT SYS020
// DLBL DATAR1,'EXAMPL.DBYYY.DATAR1'
```

```
// EXTENT SYS021
// DLBL WORKR1,'EXAMPL.DBYYY.WORKR1'
// EXTENT SYS022
// DLBL PLOGR1,'EXAMPL.DBYYY.PLOGR1'
// EXTENT SYS027
// DLBL PLOGR2,'EXAMPL.DBYYY.PLOGR2'
// EXTENT SYS028
// ASSGN SYS009,PRINTER
// EXEC ADARUN,SIZE=ADARUN
ADARUN PROG=ADANUC
ADARUN CLUSTER=LOCAL
ADARUN MODE=MULTI
ADARUN SVC=SSS               <--- INSERT YOUR SVC NUMBER
ADARUN DBID=YYY              <--- INSERT YOUR DATABASE ID
ADARUN NUCID=NNNNN           <--- INSERT YOUR NUCLEUS ID
ADARUN CLUCACHESIZE=XXXXXXXX <--- INSERT YOUR CACHE SIZE
ADARUN CLULOCKSIZE=XXXXXXXX  <--- INSERT YOUR LOCK SIZE
ADARUN DEVICE=3390
ADARUN CT=60
ADARUN OPENRQ=NO             ---> DEFAULT = YES
ADARUN PLOGRQ=NO             ---> DEFAULT = YES
ADARUN LBP=900000
ADARUN LFIOP=300000
ADARUN LCP=10000
ADARUN LFP=12000
ADARUN LWP=350000
ADARUN LI=10000
ADARUN LS=20000
ADARUN LU=65535
ADARUN LP=1500
ADARUN NAB=16
ADARUN NISNHQ=1000           ---> FOR BATCH NATURAL INPL
ADARUN NT=8
ADARUN TT=600
ADARUN TNAA=600
ADARUN TNAE=600
ADARUN TLSCMD=300
ADARUN DUALPLS=6750          ---> 50 CYL
ADARUN DUALPLD=3390
ADARUN LOGGING=NO
/*
/&
```

Step 5: Start Adabas Parallel Services

1. Start the ADACOM initialization task on the operating system image that is hosting the Adabas Parallel Services cluster environment.

2. Start the Adabas Parallel Services cluster nuclei in any order.

   The Adabas Parallel Services cluster is now ready to process user requests.

   Rules for subsequent starts of Adabas Parallel Services are described in *Adabas Parallel Services Operations*.

Start the Adabas Parallel Services cluster nuclei in any order.

The Adabas Parallel Services cluster is now ready to process user requests.

Rules for subsequent starts of Adabas Parallel Services are described in *Adabas Parallel Services Operations*.

BS2000/OSD Systems Installation

Important:
Before installing this version of Adabas Parallel Services, ensure that you are running a currently-supported version of BS2000 OSD. For information on the BS2000 OSD versions supported by this release of Adabas Parallel Services, access Software AG's ServLine24 web site at *http://servline24.softwareag.com/public/*. In the left menu of this web page, expand **My ServLine24** and log into Secured Services. Once you have logged in, you can expand **Products** in the left menu of the web page and select **Product Roadmaps** to access the Product Version Roadmaps application. This application allows you to review platform support information for specific Software AG products and releases.

The installation procedure outlined in this section corresponds to the jobs that SMA creates to install the product.

Please note that the ADACOM initialization task mentioned below starts two subtask jobs with the ID of the ADACOM task. These are started with the `NO TIME LIMIT` or `NTL` attribute. Please ensure that this is allowed in the ID where this is started. These subtask jobs will be automatically removed when ADACOM is stopped or canceled.

1. Copy the Adabas Parallel Services data sets from tape to disk.
2. Create a startup procedure to execute the ADACOM initialization task.
3. For each Adabas cluster nucleus, customize the appropriate startup parameters and execute ADARUN from the Adabas 7.4 load library.
4. Start Adabas Parallel Services.

Step 1: Copy the Adabas Parallel Services Data Set from Tape to Disk

SMA Installation

If you are installing Adabas Parallel Services using the Software AG System Maintenance Aid (SMA), refer to the System Maintenance Aid Manual and to the information provided with the installation tape for specific installation instructions.

Manual Installation

If you are not using SMA, copy the data sets from tape to disk using the procedure described below.

1. Copy the Library SRV*nnn*.LIB from Tape to Disk

   This step is not necessary if you have already copied the library SRV*nnn*.LIB from another Software AG tape. For more information, refer to the element #READ-ME in this library.

The library SRV*nnn*.LIB is stored on the tape as the sequential file SRV*nnn*.LIBS containing LMS commands. The current version *nnn* can be obtained from the Report of Tape Creation. To convert this sequential file into an LMS-library, execute the following commands:

```
/IMPORT-FILE SUPPORT=*TAPE(FILE-NAME=SRVnnn.LIBS, -
/   VOLUME=<volser>, DEV-TYPE=<tape-device>)
/ADD-FILE-LINK LINK-NAME=EDTSAM, FILE-NAME=SRVnnn.LIBS, -
/   SUPPORT=*TAPE(FILE-SEQ=3), ACC-METH=*BY-CAT, -
/   BUF-LEN=*BY-CAT, REC-FORM=*BY-CAT, REC-SIZE=*BY-CAT
/START-EDT
@READ '/'
@SYSTEM 'REMOVE-FILE-LINK EDTSAM'
@SYSTEM 'EXPORT-FILE FILE-NAME=SRVnnn.LIBS'
@WRITE 'SRVnnn.LIBS'
@HALT
/ASS-SYSDTA SRVnnn.LIBS
/MOD-JOB-SW ON=1
/START-PROG $LMS
/MOD-JOB-SW OFF=1
/ASS-SYSDTA *PRIMARY
```

where <*tape-device*> is the device type of the tape (for example, TAPE-C4) and <*volser*> is the volume serial number of the tape (see the *Report of Tape Creation*).

2. Copy the Procedure COPY.PROC from Tape to Disk

   Call the procedure P.COPYTAPE in the library SRV*nnn*.LIB to copy the procedure COPY.PROC to disk:

   ```
   /CALL-PROCEDURE (SRVnnn.LIB,P.COPYTAPE), -
   / (VSNT=<volser>, DEVT=<tape-device>)
   ```

   If you use a TAPE-C4 device, you can omit the parameter DEVT.

3. Copy all Product Files from Tape to Disk

   Enter the procedure COPY.PROC to copy all Software AG product files from tape to disk:

   ```
   /ENTER-PROCEDURE COPY.PROC, DEVT=<tape-device>
   ```

   If you use a TAPE-C4 device, you can omit the parameter DEVT. The results of this procedure are written to the file L.REPORT.SRV.

Copy the Procedure COPY.PROC from Tape to Disk

Call the procedure P.COPYTAPE in the library SRV*nnn*.LIB to copy the procedure COPY.PROC to disk:

```
/CALL-PROCEDURE (SRVnnn.LIB,P.COPYTAPE), -
/ (VSNT=<volser>, DEVT=<tape-device>)
```

If you use a TAPE-C4 device, you can omit the parameter DEVT.

Copy all Product Files from Tape to Disk

Enter the procedure COPY.PROC to copy all Software AG product files from tape to disk:

```
/ENTER-PROCEDURE COPY.PROC, DEVT=<tape-device>
```

If you use a TAPE-C4 device, you can omit the parameter DEVT. The results of this procedure are written to the file L.REPORT.SRV.

Step 2: Create a Start-Up Procedure for ADACOM

- The following is an example startup procedure for ADACOM:

```
/BEGIN-PROC C
/ASS-SYSOUT L.ADA99.COM.O
/RE-F-LI *
/SET-JOB-STEP
/DEL-FI DDCARD
/SET-JOB-STEP
/CRE-FI DDCARD,PUB()
/SET-JOB-STEP
/DEL-FI DDKART
/SET-JOB-STEP
/MOD-J-SW ON=(4,5)
/ASS-SYSDTA *SYSCMD
/STA-PROG EDT
ADARUN PROG=ADACOM,IDTNAME-AIDT01
@W 'DDCARD' O
@H
/SE-F-LI EDTSAM,DDKART,REC-FORM=F(REC-SIZE=80)
/STA-PROG EDT
ADACOM IDTNAME=ADAIDT01,DBID=99,NU=400
ADACOM IDTNAME=ADAIDT01,DBID=199,NU=2000
@W '/' O
@H
/SET-JOB-STEP
/MOD-J-SW OFF=(4,5)
/MOD-TEST DUMP=YES
/ASS-SYSLST L.ADA99.COM.L
/SET-JOB-STEP
/SE-F-LI DDLIB,ADAvrs.MOD
/SE-F-LI BLSLIB00,ADAvrs.MOD
/SE-F-LI COMPRINT,COMPRINT.FILE,REC-FORM=F(REC-SIZE=160)
/SE-F-LI DDDRUCK,#DRUCK
/SE-F-LI DDCARD,DDCARD
/SE-F-LI DDKARTE,DDKART
/ASS-SYSDTA *PRIM
/STA-PROG *M(ADAvrs.MOD,ADARUN),R-M=*A(ALT=Y)
/ASS-SYSLST *PRIM
/ASS-SYSOUT *PRIM
/END-PROC
```

Step 3: Create a Startup Procedure for Each Cluster Nucleus

1. Customize a startup procedure to execute ADARUN.

   For each Adabas cluster nucleus, customize the appropriate startup parameters and execute ADARUN from the Adabas 7.4 load library.

2. Set the ASMvrs.MOD library into the BLSLIBnn chain and start the ADARUN job with the following option:

```
RUN-MODE=*ADV(ALT-LIB=Y)
```

3. Allocate and format a Work container for each nucleus.

   All nuclei in an Adabas Parallel Services cluster share a common database resource; i.e., the same ASSO and DATA containers. Each nucleus in the cluster must have its own Work container; and all Work containers within a cluster must have the same size and device type as defined in the general control block (GCB).

   Use SUP=DISK(SHARE-UPD=YES) on the linkname for the work container (DDWORKR1). During an offline or online restart/recovery, a nucleus may access the work data sets belonging to other nuclei in the cluster.

4. Specify for each nucleus the ADARUN parameters `CLUSTER`, `NUCID`, `CLUCACHESIZE`, `CLULOCKSIZE`.

   Although each nucleus of an Adabas cluster shares the same database resource (DBID), each nucleus must have a unique NUCID value:

   - a single (noncluster) nucleus: NUCID=0 (default)
   - a cluster nucleus: NUCID=1-65000

   Adabas Parallel Services provides default global cache and lock area names for each cluster that are unique in the Adabas Parallel Services system.

   Values for the `CLUCACHESIZE` and `CLULOCKSIZE` parameters are required for allocating the global data spaces. Read *Performance and Tuning*.

   Use current values for all other ADARUN parameters, then reevaluate the values after monitoring the result. Ensure that each nucleus in the cluster is prepared to handle the entire workload for the common database, if necessary.

5. If protection logs are used, they must be dual or multiple logs and each nucleus must have its own. If one nucleus in the cluster runs with PLOGs, all nuclei in the cluster must run with PLOGs. The ADARUN `PLOGRQ` parameter must be the same for all nuclei (global parameter).

   If user exit 2 or user exit 12 is supplied for one nucleus, the same user exit must be supplied for all nuclei in the cluster. User exit 12 must be used instead of user exit 2 if NCLOG/NPLOG is specified.

6. If command logs are used, each nucleus must have its own. If command logs are to be merged, they must be dual or multiple command logs and each nucleus in the cluster must have the same CLOG definition. To invoke automatic CLOG merging, CLOGMRG=YES must be specified in the ADARUN parameters or given as an operator or AOS/ADADBS command to any nucleus in the cluster.

   The following sample job (job ASMNUC in the ASM*vrs*.SRC library) executes the Adabas ADARUN program to implement session parameters for an Adabas Parallel Services cluster nucleus.

```
/.ADANUC SET-LOGON-PARAMETERS
/REMARK This is a startup job for the Parallel Services Nucleus
/REMARK
/REMARK The parameters need to be customized according to the
/REMARK customer’s environment.
/REMARK Details are available in the Operations Manual
```

```
/MOD-TEST DUMP=YES
/COPY-FILE L.NUC.SM,L.NUC.SM.OLD
/SET-JOB-STEP
/ASS-SYSLST L.NUC.SM
/SET-FILE-LINK DDLIB,ADAvrs.MOD
/SET-FILE-LINK BLSLIB00,ADAvrs,SM.MOD
/SET-FILE-LINK DDASSOR1,ADAddd.ASSO   ,SUP=DISK(SHARE-UPD=YES)
/SET-FILE-LINK DDDATAR1,ADAddd.DATA   ,SUP=DISK(SHARE-UPD=YES)
/SET-FILE-LINK DDWORKR1,ADAddd.WORK   ,SUP=DISK(SHARE-UPD=YES)
/SET-FILE-LINK DDPLOGR1,ADAddd.PLOGR1 ,SUP=DISK(SHARE-UPD=YES)
/SET-FILE-LINK DDPLORR2,ADAddd.PLOGR2 ,SUP=DISK(SHARE-UPD=YES)
/START-PROGRAM (ADAvrs.MOD,ADARUN),PR-MO=ANY,RUN-MO=A(A-L=Y)
ADARUN PROG=ADANUC
ADARUN CLUSTER=LOCAL
ADARUN MODE=MULTI
ADARUN IDTNAME=ADAiiiii <--- INSERT YOUR IDTNAME
ADARUN DBID=ddd <--- INSERT YOUR DATABASE ID
ADARUN NUCID=nnnnn <--- INSERT YOUR NUCLEUD ID
ADARUN CLUCACHESIZE=XXXXXXXX <--- INSERT YOUR CACHE SIZE
ADARUN CLULOCKSIZE=XXXXXXXX <--- INSERT YOUR LOCK SIZE
ADARUN DEVICE=2000
ADARUN CT=60
ADARUN OPENRQ=NO ---> DEFAULT = YES
ADARUN PLOGRQ=NO ---> DEFAULT = YES
ADARUN LBP=900000
ADARUN LFIOP=300000
ADARUN LCP=10000
ADARUN LFP=12000
ADARUN LWP=350000
ADARUN LI=10000
ADARUN LS=20000
ADARUN LU=65535
ADARUN LP=1500
ADARUN NAB=16
ADARUN NISNHQ=1000 ---> FOR BATCH NATURAL INPL
ADARUN NT=8
ADARUN TT=600
ADARUN TNAA=600
ADARUN TNAE=600
ADARUN TLSCMD=300
ADARUN DUALPLS=6750 ---> 50 CYL
ADARUN DUALPLD=2000
/LOGOFF NOSPOOL
```

Set the ASMvrs.MOD library into the BLSLIBnn chain and start the ADARUN job with the following option:

```
RUN-MODE=*ADV(ALT-LIB=Y)
```

Allocate and format a Work container for each nucleus.

All nuclei in an Adabas Parallel Services cluster share a common database resource; i.e., the same ASSO and DATA containers. Each nucleus in the cluster must have its own Work container; and all Work containers within a cluster must have the same size and device type as defined in the general control block (GCB).

Use SUP=DISK(SHARE-UPD=YES) on the linkname for the work container (DDWORKR1). During an offline or online restart/recovery, a nucleus may access the work data sets belonging to other nuclei in the cluster.

Specify for each nucleus the ADARUN parameters CLUSTER, NUCID, CLUCACHESIZE, CLULOCKSIZE.

Although each nucleus of an Adabas cluster shares the same database resource (DBID), each nucleus must have a unique NUCID value:

- a single (noncluster) nucleus: NUCID=0 (default)
- a cluster nucleus: NUCID=1-65000

Adabas Parallel Services provides default global cache and lock area names for each cluster that are unique in the Adabas Parallel Services system.

Values for the CLUCACHESIZE and CLULOCKSIZE parameters are required for allocating the global data spaces. Read *Performance and Tuning*.

Use current values for all other ADARUN parameters, then reevaluate the values after monitoring the result. Ensure that each nucleus in the cluster is prepared to handle the entire workload for the common database, if necessary.

If protection logs are used, they must be dual or multiple logs and each nucleus must have its own. If one nucleus in the cluster runs with PLOGs, all nuclei in the cluster must run with PLOGs. The ADARUN PLOGRQ parameter must be the same for all nuclei (global parameter).

If user exit 2 or user exit 12 is supplied for one nucleus, the same user exit must be supplied for all nuclei in the cluster. User exit 12 must be used instead of user exit 2 if NCLOG/NPLOG is specified.

If command logs are used, each nucleus must have its own. If command logs are to be merged, they must be dual or multiple command logs and each nucleus in the cluster must have the same CLOG definition. To invoke automatic CLOG merging, CLOGMRG=YES must be specified in the ADARUN parameters or given as an operator or AOS/ADADBS command to any nucleus in the cluster.

The following sample job (job ASMNUC in the ASM*vrs*.SRC library) executes the Adabas ADARUN program to implement session parameters for an Adabas Parallel Services cluster nucleus.

```
/.ADANUC SET-LOGON-PARAMETERS
/REMARK This is a startup job for the Parallel Services Nucleus
/REMARK
/REMARK The parameters need to be customized according to the
/REMARK customer’s environment.
/REMARK Details are available in the Operations Manual
/MOD-TEST DUMP=YES
/COPY-FILE L.NUC.SM,L.NUC.SM.OLD
/SET-JOB-STEP
/ASS-SYSLST L.NUC.SM
/SET-FILE-LINK DDLIB,ADAvrs.MOD
/SET-FILE-LINK BLSLIB00,ADAvrs,SM.MOD
/SET-FILE-LINK DDASSOR1,ADAddd.ASSO   ,SUP=DISK(SHARE-UPD=YES)
/SET-FILE-LINK DDDATAR1,ADAddd.DATA   ,SUP=DISK(SHARE-UPD=YES)
/SET-FILE-LINK DDWORKR1,ADAddd.WORK   ,SUP=DISK(SHARE-UPD=YES)
/SET-FILE-LINK DDPLOGR1,ADAddd.PLOGR1 ,SUP=DISK(SHARE-UPD=YES)
/SET-FILE-LINK DDPLORR2,ADAddd.PLOGR2 ,SUP=DISK(SHARE-UPD=YES)
/START-PROGRAM (ADAvrs.MOD,ADARUN),PR-MO=ANY,RUN-MO=A(A-L=Y)
ADARUN PROG=ADANUC
ADARUN CLUSTER=LOCAL
ADARUN MODE=MULTI
ADARUN IDTNAME=ADAiiiii <--- INSERT YOUR IDTNAME
```

```
ADARUN DBID=ddd <--- INSERT YOUR DATABASE ID
ADARUN NUCID=nnnnn <--- INSERT YOUR NUCLEUD ID
ADARUN CLUCACHESIZE=XXXXXXXX <--- INSERT YOUR CACHE SIZE
ADARUN CLULOCKSIZE=XXXXXXXX <--- INSERT YOUR LOCK SIZE
ADARUN DEVICE=2000
ADARUN CT=60
ADARUN OPENRQ=NO ---> DEFAULT = YES
ADARUN PLOGRQ=NO ---> DEFAULT = YES
ADARUN LBP=900000
ADARUN LFIOP=300000
ADARUN LCP=10000
ADARUN LFP=12000
ADARUN LWP=350000
ADARUN LI=10000
ADARUN LS=20000
ADARUN LU=65535
ADARUN LP=1500
ADARUN NAB=16
ADARUN NISNHQ=1000 ---> FOR BATCH NATURAL INPL
ADARUN NT=8
ADARUN TT=600
ADARUN TNAA=600
ADARUN TNAE=600
ADARUN TLSCMD=300
ADARUN DUALPLS=6750 ---> 50 CYL
ADARUN DUALPLD=2000
/LOGOFF NOSPOOL
```

Step 4: Start Adabas Parallel Services

1. Start the ADACOM initialization task on the operating system image that is hosting the Adabas Parallel Services cluster environment.

   As mentioned earlier, the ADACOM starts two subtask jobs with the same ID as the ADACOM job itself. These write SYSOUT and SYSLST data to files with the following format:

   `L.<O/L>,<tsn>.ADABSP##.<timestamp>`

   where <*O/L*> is either "O" for SYSOUT or "L" for SYSLST, <*tsn*> is the task number of the ADACOM job, and <*timestamp*> is a 16-character printable hexadecimal string representing the STCK time when the subtask was started.

   The content of these files may be useful when diagnosing errors.

2. Start the Adabas Parallel Services cluster nuclei in any order.

   The Adabas Parallel Services cluster is now ready to process user requests.

   Rules for subsequent starts of Adabas Parallel Services are described in the section *Adabas Parallel Services Operations*.

   Note:
   A cluster is a group of databases sharing the processing of one logical database ID (DBID).

Start the Adabas Parallel Services cluster nuclei in any order.

The Adabas Parallel Services cluster is now ready to process user requests.

Rules for subsequent starts of Adabas Parallel Services are described in the section *Adabas Parallel Services Operations*.

Note:
A cluster is a group of databases sharing the processing of one logical database ID (DBID).