

EspControl

Change Control System for NATURAL On Open Systems

Installation Manual



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READ ME FIRST

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Applicable for EspControl Version 6.07

1. OVERVIEW

This document explains the installation and configuration procedures for installing and setting-up:

EspControl

Additional configuration guidelines for:

EspControl

2. INSTALLATION STEPS

- a. Create a NATPARM profile Module
- b. Create or allocate Database (for ESP files)
- c. Run `espcontrol_v6xx_install` script
- d. Re-link Natural with ESP user-exits
- e. Verify Remote Communication (rsh/ssh)
- f. Update DB parameters
- g. Load Natural Modules
- h. Set-up EspControl parameters
- i. Run Source Code scanner for EspControl inventory.

3. PRE-REQUISITES

- We assume that the all the required **Software AG** Products are **installed** and in working order. (Natural and Adabas)
- If **Natural Security** is installed access to Natural must be set with **AUTO=ON**
- A **“C” compiler** is available to **re-link Natural** nucleus with ESP user-exits.
- The person installing is familiar with SAG product set-up especially **“Natparm”**
- Most of the commands will be done as user-id “sag” and that you have access to “root” command prompt to define the **Unix/Linux Remote communication protocol**
- The remote shell (**rsh** or **ssh**) has been configured.



4. EXTRACT CRONUS SOFTWARE

Create a temporary directory and uncompress/gunzip the supplied media from CD-ROM/DVD or Email file in directory of choice e.g.:

As the user-id "sag"
mkdir /tmp/cronus_tmp

FTP the supplied **espcontrol."version".tar.gz** file using **BINARY** to the **/tmp/cronus_tmp** directory.

As the user-id "sag"
Example:
uncompress (or gunzip on Linux) espcontrol.v607.tar.gz (or .Z)

5. UNPACK THE SOFTWARE

Change to the **cronus** directory and extract the uncompressed **espcontrol."version".tar** file located in the temp directory as per point 4.

***NOTE * - We assume that user-id sag has a "umask" setting of 002.
This means that the files and directories will be created with the correct permissions for the installation.**

As the user-id "sag"
Example:
cd /tmp/cronus_tmp
umask 002
tar xvf <your_temp_dir>/espcontrol.v6nn.tar
(where v6nn is the version as per supplied software)



6. SETUP NATPARM(S)

For EspControl to function properly we require special attributes to be set in the “NATPARM” module used when evoking “Natural”.

The following attributes can be updated/changed in to your “**default**” **natparm profile** or you can create a separate **natparm** for EspControl. We recommend creating a “**duplicate**” **natparm profile** for EspControl, this should be done in each of the Natural environments that will be managed by EspControl. The workfile assignments will be changed to accommodate the ESP software requirement and this might affect your current application requirements.

The create a “**duplicate**” **natparm profile**; open your “**default**” **natparm profile** and use the **SAVE AS** option from NATPARM function to save the new name **ESPCC**. Select natparm **ESPCC** with **FILE OPEN**.

For the purpose of this document we assume you are creating a new NATPARM for Cronus.

Execute the Software AG **NATPARM** profile editor

As the user-id “**sag**”
natparm

Open the ESPCC natparm:
(FILE OPEN – select ESPCC)

Verify the following minimum requirements.

Buffer Sizes:

SAG Editor (EDTBPSIZE) 4000
SAG Editor Logical Files 512
Storage for sort 1024
Source Area 4
Work Area 10



Environment Assignments - STEPLIBS

Add **ESPSOFT** with default **fuser DBID** and **FNR** as **STEPLIB**

Add **SYSEXT** with default **fnat DBID** and **FNR** as **STEPLIB**

Limits

Processing Loop Limit **LT 0**

MADIO 0

MAXCL 0

System Time Delay **0**

Workfiles

Number 1 = **\$NATWK01**

Number 2 = **\$NATWK02**

Number 3 = **\$NATWK03**

Number 4 = **\$NATWK04**

..

..

Number 31 = **\$NATWK31**

Number 32 = **\$NATWK32**

The format of the workfiles can be left at "default".

Save the Natparm "ESPCC"

This "NATPARM" should always be used to execute EspControl product – it is referenced in the "espcc" scripts located in **\$SAG/cronus/natscripts**; you should verify and update the script if the NATPARM module is named different or if you are using a different Natural Bufferpool name (other than natbp)



7. ADABAS DATABASE REQUIREMENT

A. Create separate ESP ADABAS Database

This step can be ignored if the ESP files are loaded in your current database – (refer to section **7B**). Make sure to use this **DBID** when executing the `espcontrol_v6xx_install` script.

Create a Cronus ESP Database using **dbgen** (our default nr is 31)

On the Unix/Linux command prompt execute **dbgen** and follow the option on “main” menu.

parameter:

Database ID : 31
Database name : ESP_DB
Database path : /usr/SAG/ada
Maximum number of files : 4000
Command interpreter : /bin/sh
Configuration file name : db31.conf

container:

Minimum configuration

CONTAINER	SIZE	BLKSZE	Root Path Name...
ASSO	600MB	8KB	Raw or F/system
DATA	800MB	16KB	Raw or F/system
WORK	200MB	16KB	Raw or F/system

Recommended configuration

CONTAINER	SIZE	BLKSZE	Root Path Name...
ASSO	1500MB	8KB	Raw or F/system
DATA	2500MB	16KB	Raw or F/system
WORK	400MB	16KB	Raw or F/system

Execute the “**adainst 031**” command to create a default **DB031.INI** file.



Insert the Cronus suggested DB **NUCPARMS** in the **\$\$SAG/ada/db031/DB031.INI** file.
Copy the example file from

<tempdir>/install_espcontrol/cronus_struct/system/db_parms/db031.ini into the DB031.INI file under the section NUCPARMS.

```
cd <tempdir>/install/system/db_parms/  
cp db031.ini $ADADIR/db031/db031.ini
```

If you wish to create a database using SAG defaults you can copy the example Cronus INI file after the installation. Insert the Cronus suggested DB **NUCPARMS** in the **\$\$SAG/ada/db031/DB031.INI** file. Copy the example file from **\$\$SAG/cronus/system/db_parms/db031.ini** into the DB031.INI file under the section NUCPARMS.

```
cd $$SAG/cronus/system/db_parms/  
cp db031.ini $ADADIR/db031/db031.ini
```

Edit the **DB031.INI** and insert the **db031.ini** at the end between **NUCPARMS** and **NUCPARMS-END**.

You can reduce the size of the Adabas parameter LAB,LBP and LWP to 50MB and reduce the size of LP=2000 and not 20000 – this is depending on the size of the WORK dataset and version of Adabas installed.

Start the database as “sag”
adastart 031

Update the **assign.bsh** to have SORT1 SORT2 and TEMP1 defined.

B. Requirement on existing ADABAS Database

The installation script will load the required ESP files in the database you supply during the installation. **PLEASE NOTE:** The ESP file numbers range from **3000 to 3005**. Please contact Cronus if you wish to change this or you could create a separate Database to host the ESP files.



8. INSTALL CRONUS STRUCTURE

Install using user-id "sag"

On the Unix/Linux Prompt execute as user-id "sag"

```
cd <your_tmp_dir>  
./espcontrol_v6nn_install
```

Confirmation and required parameters during the execution of the install script:

- **You be prompted to confirm path setting for \$SAG
EspControl and Cronus structure is created under \$SAG**

- **You be prompted to enter the NATPARM module name created or updated in section 7
of this document.**

The installation script can be restarted.



Example output displayed from install script:

```
Cronus Consulting Install Procedure:  
(C) Copyright Cronus Consulting 2006  
EspControl v607  
  
Installing from /usr/cronus_temp  
  
%CRONUS-I-SAGPATH, Found $SAG as /usr/sag - is this correct?  
Please enter if this path is correct or enter SAG path:  
%CRONUS-I-SAGPATH, Setting $SAG as /usr/sag  
Please enter the 3 digit ESP DBID or enter for the default of 031:031  
%CRONUS-I-ESPDDBID, ESP Database is set to: 031  
%CRONUS-I-SAGPATH, Loading SAG environment  
%CRONUS-W-CRONHMD, Creating Cronus Root directory  
%CRONUS-I-COPYCCS, Building Cronus Structure  
%CRONUS-I-COPYSTR, Cronus Structure created successfully  
Please enter the NATPARM module for EspControl environment:ESPCC  
%CRONUS-I-COPYCCE, Building Cronus :dev: script path  
%CRONUS-I-COPYCCE, ENV copied and updated!  
%CRONUS-I-LOADCCE, Loading Cronus :ESPCC: environment  
Setting Cronus Environment  
%CRONUS-I-LOADCCE, Loaded Cronus environment successfully  
%CRONUS-I-CCADADB, Checking for DB031 database  
%CRONUS-I-CCADADB, DB031 located successfully  
%CRONUS-I-FILEFDU, Loading Cronus Adabas Files  
%CRONUS-I-FILEFDU, Loaded Cronus Adabas Files  
%CRONUS-I-FILEFDU, Checking logfile  
%CRONUS-I-FILEFDU, Cronus Adabas files loaded successfully  
%CRONUS-I-GZIPESP, Extracting ESP Program files  
%CRONUS-I-GZIPESP, ESP Programs successfully uncompressed.  
  
Press [ENTER] key to complete the Linux/Unix setup...
```



START OF INFORMATION NOTE:

Environment files “sysenv.system and sysenv.setup” (Default configuration)

Important environment variables are defined in the Cronus **sysenv.system** file. This file can be modified to allow global setting for a specific group or individual users.

Important Variables

PRINTTMP=\$CRONUS/data/wf/spool_tmp

PATH=\$PATH:/usr/local/bin

Default aliases:

alias **espcc**='\$CRONUS/natscripts/esp'

Note: Additional “global” environment variables, path settings and alias can be defined to suite your specific needs. By defining global settings-paths in the sysenv.system file, you will limit the amount of changes to a single file rather than changing all .profile files on the system.

END OF INFORMATION NOTE:



9. RELINK THE NATURAL NUCLEUS

9.1 Applicable only to Natural v61 and below

The Cronus user-exits are located in **\$SAG/cronus/install_espcontrol/esp_uexit** directory. Make a backup of the current SAG "sysexuex" directory before you start.

```
cd $NATDIR/$NATVERS/samples/  
cp -rp sysexuex sysexuex.orig
```

Uncompress and extract the Cronus user-exits and copy the files to the "sysexuex" directory.

```
cd $SAG/cronus/install/esp_uexit/v61<your_O/S>  
cp * $NATDIR/$NATVERS/samples/sysexuex
```

The following files are required from Cronus:

jumptab.c	Jump Table
Makefile.esp	Makefile with Cronus user-exits
usrfunc.c	Cronus ESP user-exist
natlutil.c	Link utility functions
natlutil.h	Link utility functions – declarations
README_ESP.TXT	Read-me file with instructions

A) Create a "natural" executable linked with Natural Security:

The re-link of the user-exits should be done after the Natural Security software has been installed.

Change to the "\$NATDIR/\$NATVERS/samples/sysexuex" directory.

```
<sag: > cd $NATDIR/$NATVERS/samples/sysexuex
```

Execute make command:

```
<sag: > make -f Makefile.esp natural ada=yes
```

A new "**natural**" executable is created in the current directory.

Install the executable to \$NATDIR/\$NATVERS/bin/natural

```
<sag: > make install
```

or manually

```
<sag:> cp -p $NATDIR/$NATVERS/bin/natural natural.b4.esp
```

```
<sag:> cp -p natural $NATDIR/$NATVERS/bin/natural
```

**B) Create a "natural" executable without Natural Security:**

The re-link of the user-exits should be done prior to the installation of Natural Security. If Security is already installed the natsec.a link should be removed from the natprolib.lst file located under the \$NATDIR/extlib directory – make a copy of the existing file before you remove the link to natsec.a

```
<sag: > cd $NATDIR/extlib
```

```
<sag: > cp -p natprolib.lst natprolib.lst.orig
```

```
<sag: > vi natprolib.lst
```

Remove the line **\$NATDIR/\$NATVERS/bin/natsec.a**

Change to the "\$NATDIR/\$NATVERS/samples/sysexuex" directory.

```
<sag: > cd $NATDIR/$NATVERS/samples/sysexuex
```

Execute make command:

```
<sag: > make -f Makefile.esp natural ada=yes
```

A new "**natural**" executable is created in the current directory.

Install the executable to \$NATDIR/\$NATVERS/bin/natural

```
<sag:> cp -p $NATDIR/$NATVERS/bin/natural natural.b4.esp
```

```
<sag:> cp -p natural $NATDIR/$NATVERS/bin/natural.nosec
```

or

If only one nucleus is required

```
<sag:> cp -p natural $NATDIR/$NATVERS/bin/natural
```

Restore the natsec.a link in \$NATDIR/extlib/natprolib.lst

```
<sag: > cd $NATDIR/extlib
```

```
<sag: > cp -p natprolib.lst.orig natprolib.lst
```



9.2 Applicable only to Natural v62 and above

The Cronus user-exists are located in **\$SAG/cronus/install_espcontrol/esp_uexit** directory. Make a backup of the current SAG “**sysexuex**” directory before you start.

```
cd $NATDIR/$NATVERS/samples/
cp -rp sysexuex sysexuex.orig
```

Uncompress and extract the Cronus user-exits and copy the files to the “**sysexuex**” directory.

```
cd $SAG/cronus/install/esp_uexit/v622<your_O/S>
cp * $NATDIR/$NATVERS/samples/sysexuex
```

The following files are required from Cronus:

Makedyn.esp	Dynamic Makefile with Cronus user-exits
jumptab.c	Jump Table
nattab.h	Header file
natuser.h	Header file
ncuxinit.c	Entry point table
usrfunct.c	Cronus ESP user-exist
README_ESP.TXT	Read-me file with instructions

A) Create a "usrfunct.so" share library module that is included in the default nucleus.

Change to the “**\$NATDIR/\$NATVERS/samples/sysexuex**” directory.

```
<sag: > cd $NATDIR/$NATVERS/samples/sysexuex
```

Execute make command:

```
<sag: > make -f Makedyn lib
```

A new "**usrfunct.so**" executable is created in the current directory.

Install the executable to **\$NATDIR/\$NATVERS/bin/natural**

```
<sag: > cp -rp usrfunct.so $NATDIR/$NATVERS/bin
```

Set the NATUSER environment variable for everyone that is accessing Natural.

```
<sag: > export NATUSER=$NATDIR/$NATVERS/bin/usrfunct.so
```

Edit the “sagenv” file and add the setting.

```
export NATUSER=$NATDIR/$NATVERS/bin/usrfunct.so
```



START OF INFORMATION NOTE: (Not applicable for Nat V622>)**Security and Non security Nuclei**

Before Natural Security is installed a copy of the FNAT (\$NATDIR/\$NATVERS/fnat) should be made to eg. (\$NATDIR/\$NATVERS/fnat.nosec) - If this is not possible a copy can be made from the "\$NATDIR/\$NATVERS/fnat.backup" directory that was created during the installation of Natural Security (if the option was selected)

The non-security FNAT (fnat.nosec) should always be referenced in NATPARM modules accessing the "non-security nucleus". The default FNAT assignment is: DBID 22 and FNR 10; Once the "fnat.nosec" directory copy was made an additional FNAT assignment should be defined in the NATPARM Global Configuration System File Assignments tab eg. DBID 222 and FNR 10 referencing the new PATH \$NATDIR/\$NATVERS/fnat.nosec.

Any scripts and or aliases used to access natural should be changed to reference the correct nucleus and associated NATPARM modules.

E.g. Natural nucleus with Security:

Nucleus name : "natural"
Location : \$NATDIR/\$NATVERS/bin/natural
FNAT Assignment : DBID: 22 and FNR 10
FNAT Path : \$NATDIR/\$NATVERS/fnat
NATPARM Module : **"devs"** using < FNAT System file assignment 22,10 >
< FSEC information DBID and FNR set>

E.g. Natural nucleus without Security:

Nucleus name : "natural.nosec"
Location : \$NATDIR/\$NATVERS/bin/natural.nosec
FNAT Assignment : DBID: 222 and FNR 10
FNAT Path : \$NATDIR/\$NATVERS/fnat.nosec
NATPARM Module : **"dev"** using < FNAT System file assignment 222,10>
< Do not define FSEC information>

END OF INFORMATION NOTE:



10. LOAD CRONUS NATURAL SOURCE

The Natural load module **YSOBJH** requires that certain workfiles are set before the load process.

Set temporary **workfiles 3 & 4** to temp files and set **workfile 1** as main input file.

Example.

```
NATWK01=$SAG/cronus/install_espcontrol/esp_src/esp.src.v6nn.txt
NATWK03=/tmp/wf3.txt
NATWK04=/tmp/wf4.txt
export NATWK01 NATWK03 NATWK04
```

Execute Natural using the “newly” created natparm “ESPCC” or your default PARM

```
natural parm=<your_parm> etid=$$ bp=natbp
or
execute the alias “espcc”
```

(The aliases are set-up in the sysenv.system file and it executes the script in the \$SAG/cronus/natscripts directory)

On the direct command line enter “**YSOBJH**”

```
Select Load Objects
Select Load objects from Natural work file(s)
Select Transfer format
Verify the workfile name: Work file $NATWK01
Continue with defaults
Load all object from the workfile
Enter on the confirmation screen
You should see a message “Load Function Started”
```

Once the load has completed you will see a report with all the objects loaded – Use pf3 or (%k3) to terminate SYSOBJH session...



11. VERIFY DBID'S ON CRONUS DDMS

On the Natural direct command prompt execute.

LOGON ESPSOFT

If you elected to use your own DB for the ESP files follow the procedure below to change to DBID's for the ESP files using your DBID.

List of the **DDMS** to verify the **DBID** has been set to **31 (Default Cronus Database)**

lv *

If the DBID's are not set to the Cronus DB (default 31) – use **DDM Services** to change the DBIDs to the new Cronus DBID. The following script and series of commands can help.

Change the DBID with these simple Steps:

Make a temp directory to copy the Cronus DDMs to.

Create a script to change the DBID's

Execute the script

Import the new DDMs.

```

mkdir /tmp/ddms
mkdir /tmp/ddms/new

cd $NATDIR/fuser/ESPSOFT/SRC
cp *.NSD /tmp/ddms

cd /tmp/ddms
vi dbid.bsh

ls *.NSD > /tmp/ddms/ddm.list
for file in `cat /tmp/ddms/ddm.list`
do
    echo $file
    cat $file | sed s/"DB: 00031"/" DB: 00xxx"/ > $file.new
    mv $file.new /tmp/ddms/new/$file
done

```

Where "xxx" IS YOUR DBID.

Execute Natural using the "newly" created natparm "ESPCC" or your default and execute sysmain – import function to load the DDMs from the /tmp/ddms/new directory. Overwrite **YES**



12. COMPILE CRONUS SOURCE

Execute Natural using the “newly” created natparm “ESPCC” or your default PARM

natural parm=<your_parm> etid=\$\$ bp=natbp

or

execute the alias “espcc”

Logon to Library **ESPSOFT** and execute the “**CATALL**” command. On the Natural direct command prompt execute.

LOGON ESPSOFT

CATALL

All the programs should compile – if **not** contact Cronus with errors.



13. EXECUTE THE ESP INSTALL PROGRAM

On the Natural direct command prompt execute.

LOGON ESPSOFT

CINSTALL

EspMenu Defaults

```

Cronus Development
File Edit Options Send Receive Window Help
2006-04-24 NATURAL Library: ESPSOFT
15:00
User
Cronus Consulting ReHosting Install Program - ESPMENU
Libr
Database Id.....: 31_
Environment Name: DEU
Program Path....: /usr/SAG/nat/fuser
Company Name....: *** Cronus Consulting - DEU ***
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--P
Quit
Enter Command or NATURAL Program Name
ANSI | TCP/IP | 15:04 | 0000

```

Parameters:

Database id: 31 The default ESP Database or your DBID
Environment Name: Environment Name
Program Path: Natural Fuser Path
Company Name: Main Heading in EspMenu

After the INSTALL program you can execute the FAST command to access the programs.

IMPORTANT NOTE

The program “**ESPERTA**” must be copied manually to each of the other “Natural” environments. This program is called by EspControl to reset the default ERROR Routine.

The change control scripts that are by default located under **\$SAG/cronus/ccont** should also be copied to each of the machines – This does not apply to a single server installation unless the \$SAG/cronusccont path is renamed – see function CC001.



14. ESP SCRIPTS

START OF INFORMATION NOTE:

The ESP scripts are defined in the directory **\$\$SAG/cronus/scripts** and should be **verified** before submitted to “cron” or background scheduler.

The following scripts are defined.

Example Scripts:

Houskeeping script	remove.temp.bsh
Backup DB script	backup.bsh
daily_bck.bsh	backup.bsh

These scripts should be verified before execution.

END OF INFORMATION NOTE:



15. ESPCONTROL GUIDELINES

If **EspControl** is not yet installed or you cannot see it from the “**FAST**” menu under options “**CC**” – install it by executing Program **CINSTALL** in library **ESPSOFT**.

PLEASE NOTE: EspControl should only be installed on the DEV environment.

a. EspControl control variables are configured with function CC001

This function is used to define the EspControl control variables. These variables are used during the execution of the migration process and are defined in two groups: a) Global variables – these are set once and are applicable for all environments defined in EspControl. b) Local variables – definitions for each of the Natural environments that forms part of the EspControl environment. Information regarding the Natural program environments, libraries, host destinations and path's are defined and maintained under the local variable set-up. An environment entry should be defined for each of the Natural program environments.

```

Cronus Consulting
File Edit Options Send Receive Window Help

CCP001          *** ESPSOFT ***          04/23 03:55
CCM00101       Maintain ISR Control Variables    MENUADM

Number of Environments..: 7
Remote Shell Command...: ssh_____ (ssh, rsh or remsh)
Initial Scan Library...: ESPSOFT_
Create Logfile.....: Y          ** MASTER PROFILE RECORD **
Master Environment Index: 7          'CCA001'

Select Environment      Machine Name      DB File Buffer Pool Natparm
1 _ Development        cronus-dev:      22 20  NATBP  DEUCC
2 _ Quality Assurance  cronus-qa:      22 21  QABP  QACC
3 _ Quality Testing    cronus-prod:    22 22  PRODBP PRODCC
4 _ ESP Environment    cronus-dev:     22 23  ESPBP  ESP
5 _ UAT Environment    cronus-qa:      22 24  UATBP  UAT
6 _ CNTRL Environment  cronus-qa:      22 25  CNTRLBP CNTRL
7 _ Production SHIPPING cronus-prod:    22 26  SHIPBP SHIP
8 _
9 _
10 _

Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---
Quit Main          PgDn PrScr          Logof

VT220 TCP/IP 03:55 0000

```



The master source code environment should be defined as the “highest” number in environments.

The following global control variables should be defined:

- Number of Environments** : The total number of Natural environments
- Remote Shell-Command** : The remote access command protocol to use for transfers between environments. (ssh, rsh or remsh)
- Initial Scan Library** : Used in function CC050 for default scanning library.
- Create Logfile** : Enable additional logfile

Local control variables for each environment:

```

Cronus Consulting
File Edit Options Send Receive Window Help

CCP001          *** ESPSOFT ***          04/23 03:48
CCM00102       Maintain ISR Control Variables  MENUADM

Environment .....: 01
Environment Name...: Development_____
Local Indicator...: Y
Machine Name.....: cronus-dev:____
Fuser DBID.....: 22
Fuser File Nr.....: 20
Fuser Path.....: /usr/sag/nat/fuser_dev_____
Fuser Backup Path..: /usr/sag/nat/fuser_devbck/.BCK_____
Source Staging Area: /usr/sag/nat/fuser_devbck/.SSA_____
Nat BufferPool Name: NATBP_____
Natparm Module Name: DEVCC_____
Natural Nucleus...: natural_____
Allow Source Ind...: Y
Max Backup Versions: 7
Shell Script Path..: /usr/sag/cronus/ccont_dev_____
QA Required Ind...: Y

                                Clear all fields? NO_ (YES or NO)
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---
                                Quit Main          PgDn PrScr          Logof

VT220 | TCP/IP | 03:47 | 0000

```

The following control variables should be defined:

- Environment** : Environment Number
- Environment Name** : Environment Name – Description
- Local Indicator** : Local indicator to server where EspControl is running
- Machine Name** : Machine name/Host-name or IP address
- Fuser DBID** : Fuser DBID as defined in NATPARM
- Fuser File Number** : Fuser FILE NR as defined in NATPARM
- Fuser Path** : Complete path to fuser



Fuser Backup Path	: Complete path to backup fuser
Source Staging Area	: Complete path to source save area
(SSA should be different for each environment defined in CC001)	
Nat buffer Pool Name	: Natural Bufferpool name for this environment
Natparm Module Name	: Natparm that is used to access this environment (ESP)
Natural Nucleus Name	: Natural nucleus name (must be in default path)
Allow Source Indicator	: Indicates if source code should be allowed
Maximum Backup Versions	: The maximum number of backup versions for each module
Shell Script Path	: The complete path to ESP scripts (ccont)
QA Required Indicator	: Indicates of additional step is required before copy to Master

b. Create Master Profile

One the control codes have been defined a MASTER profile should be created based on the definitions in the CC001 Control Tabel.

Use function CC002 to define a MASTER profile.

```

Cronus Consulting
File Edit Options Send Receive Window Help
CCP002          *** ESPSOFT ***          04/23 03:58
CCM00203       Maintain ISR Profiles     MENUADM
Option:        A
Profile:       MASTER
Description:   MASTER PROFILE
-----
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---
          Quit Main                                PrScr      Logof
VT220 TCP/IP 03:57 0000

```



Accept the defaults for the MASTER profile

```

Cronus Consulting
File Edit Options Send Receive Window Help
NEW PROFILE CREATED, select PATH from default
CCP002          *** ESPSOFT ***          04/23 03:58
CCM00201       Maintain ISR Profiles     MENUADM

Number of Environments..: 7
Initial Scan Library...: ESPSOFT_
Master Environment Index: _7
Profile.....: MASTER
Profile Description.....: MASTER PROFILE

Select Path Environment      Allow A-A      Machine      (S)tow Backup
Source Y/N  User ID  Name          (C)at  Y/N

1 _ Y Development           Y Y          cronus-dev   S      Y
2 _ Y Quality Assurance     Y Y          cronus-qa:   S      Y
3 _ Y Production            Y Y          cronus-pro   S      Y
4 _ N ESP Environment       N N          cronus-dev   S      N
5 _ N UAT Environment       N N          cronus-qa:   S      N
6 _ N CNTRL Environment     N N          cronus-qa:   S      N
7 _ N SHIP Environment     N N          cronus-pro   S      N
8 _ -                      - -          -            -      -
9 _ -                      - -          -            -      -
10 - -                     - -          -            -      -

Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---
          Quit Main                                PgDn PrScr                                Logof

VT220 TCP/IP 03:58 0000

```



c. Verify CCONT script path for SAG environment file

The path to the “ccont” scripts can be changed and it is required that you set the “sagenv.ccont” file to the proper “sagenv” file used for each environment. This should be set for each environment by editing the default “**\$CRONUS/ccont/sagenv.ccont**” script. Make sure it executes correct “sagenv” file for each of the environments. If you have multiple environments or different versions of the SAG products we recommend that you define different “ccont” directories for each of the Natural environments. (eg. ccont_dev, ccont_qa and ccont_prod)

E.g.

Create a copy of the default directory “\$SAG/cronus/ccont”

```
cd $SAG/cronus
cp -rp ccont ccont_qa
cd ccont_qa
vi sagenv.ccont
```

Set the correct “sagenv” file inside the sagenv.ccont for the ccont_qa directory.

Validate path for **\$CRONUS** and cronus/ccont directories (Default name)

```
remcopy:. $CRONUS/ccont/sagenv.ccont > /dev/null 2>&1
remcopyobj:. $CRONUS/ccont/sagenv.ccont > /dev/null 2>&1
remnatbobj:. $CRONUS/ccont/sagenv.ccont > /dev/null 2>&1
remrestore:. $CRONUS/ccont/sagenv.ccont > /dev/null 2>&1
remrestorebck:. $CRONUS/ccont/sagenv.ccont > /dev/null 2>&1
remrestoreobj:. $CRONUS/ccont/sagenv.ccont > /dev/null 2>&1
```

Please remember to update CC001 with new script path definitions.

The EspControl scripts are required on each of the environments defined in **CC001**. Please copy the **\$SAG/cronus/ccont** directory and scripts to each environment/server. (retain the execution permissions). **This does not apply to a single server installation unless you have multiple SAG product versions.**

d. Copy ESPERRTA program

The program “**ESPERRTA**” must be copied manually to each of the other “Natural” environments. This program is called by EspControl to reset the default ERROR Routine. Use sysmain to copy or create a program called “ESPERRTA” that resets the *ERROR-TA variable.

RESET *ERROR-TA

END



e. Run Source-code scanner

All Natural modules must be scanned using function **CC300 – Initial Source Code scanner** before it can be migrated via EspControl. EspControl keeps an inventory of modules and their dependants – it is only updated/stored during the **Source Code** scanning process.

If you want to run the source-code scanner for the very first time – Execute the function **CC300**. **Please consult Cronus before you execute CC300**. Customers that have EspBatch installed can execute the batch source-code scanner program MP10003B.

f. Verify UNIX-SHELL settings:

SSH Setup

Define SSH certificates

ssh-keygen -t dsa

cp **id_dsa.pub** file in \$HOME/.ssh to \$HOME/.ssh/**authorized_keys**

Set the permissions to **600** for **authorized_keys**

The user's home directory should have a permission of 755 or lower. This allows the user to copy file between servers - copy the **authorized_keys** to the others **hosts-servers** in the \$HOME/.ssh directory. (This should be done by the system administrator as root access might be required)

Test the SSH commands

ssh yourhost -l sag ls -l

scp \$SAG/sagenv yourhost:/tmp/xxx

ls -l \$HOME/.ssh

```
-rw----- 1 sag sag 600 May 11 12:25 authorized_keys
```

```
-rw----- 1 sag sag 672 May 11 12:25 id_dsa
```

```
-rw-r--r-- 1 sag sag 600 May 11 12:25 id_dsa.pub
```

```
-rw-r--r-- 1 sag sag 227 May 11 12:25 known_hosts
```

Remember to manually authenticate any new/additional servers to your "ssh" environment:

ssh <server-name> ls -l

The authenticity of host 'cronus-qa' can't be established.

RSA key fingerprint in md5 is: fe:56:84:9e:d1:2a:4c:22:4b:61:3a:ed:b3:45:a9:c4

Are you sure you want to continue connecting(yes/no)?**yes**

Accept any warning messages etc

RSH/REMSH Setup

Enable normal rcp, rsh and rlogin

Define a **/etc/hosts.equiv** file

```
10.11.1.10 sag
```

```
10.11.1.10 sagcrns
```



Test the rsh/remsh connection with:

```
rlogin yourhost -l sag  
rsh yourhost -l sag ls -l  
rcp file name yourhost:/tmp
```