Issuing Operating System Commands from within a Natural Program

The Natural user exit `SHCMD` can be used to issue an operating system command, call a shell script or execute an executable program on UNIX from within a Natural program.

This chapter covers the following topics:

- Syntax

- Parameters

- Parameter Options

- Return Codes

- Examples

Syntax

CALL 'SHCMD' '*command*' ['*option*']

Parameters

`command`	Command to be executed under control of the operating system command shell. Natural waits until the command is completed and then Natural returns control back to the Natural program. For more information, see *Examples* below.
`option`	`option` describes how the command should be executed. This parameter is optional. The following options are available: • `SCREENIO` • `NOSCREENIO` See *Parameter Options* below.

Parameter Options

The following parameter options are available:

Option	Description
NOSCREENIO	This option is used to hide the output generated by the command. The hidden output is redirected to the null device.
SCREENIO	This option is used to refresh the Natural screen output after the command is completed.

Note:
The options SCREENIO and NOSCREENIO may be not set at the same time.

Return Codes

The following return code values are available:

Return Code	Description
0	Command successfully executed.
4	Illegal SHCMD parameter specified.
All other codes	Command shell return code.

Examples

Execute a command shell from within Natural:

```
CALL 'SHCMD' 'myshell.sh'
```

Execute an executable program from within Natural:

```
CALL 'SHCMD' 'myprogram'
```

Execute the operating system command ls on UNIX to list the contents of a directory:

```
CALL 'SHCMD' 'ls'
```

After executing the ls command, you will recognize that the output generated by this command has changed the last Natural screen output. You have to press the refresh-screen key to clear the screen. To do this automatically, you can specify the SCREENIO option:

```
CALL 'SHCMD' 'ls' 'SCREENIO'
```

Retrieve the return code by using the RET function:

```
DEFINE DATA LOCAL
  1 rc (I4)
END-DEFINE
CALL 'SHCMD' 'lsDIRECTORY' 'SCREENIO'
ASSIGN rc = RET( 'SHCMD' )            /* retrieve return code
IF rc <> 0 THEN
   IF rc = 4 THEN
     WRITE NOTITLE 'Illegal option specified'
   ELSE
     WRITE NOTITLE 'Command not executed successfully (rc=' rc ')'
   END-IF
```

```
 ELSE
      WRITE NOTITLE 'Command executed successfully'
END-IF
END
```