

Job Control for Jobs under Windows

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Job Control Characteristics under Windows

The job control system Entire Operations also runs in a Windows environment, with the following characteristics:

- Operating system neutral modelling of job networks.
- Entire Operations' functionality and flexibility is now also transparently available on Windows.
- Support of DOS batch files and executables (EXE).
- It is not necessary to directly enter Windows DOS commands.
- Can also run in mixed mainframe/Windows/UNIX environments.
- Job control on several Windows machines at the same time.

Windows Version Required

Entire Operations supports Windows versions starting from Windows NT Version 4.0 or higher. For Windows NT 4.0, you are recommended to install Service Pack 3 at least.

Windows is supported in all language versions.

Components Required

- Entire Operations Monitor
The Monitor can run under the operating systems BS2000/OSD, OS/390, VSE/ESA, or UNIX, concurrently controlling jobs executed under BS2000/OSD, OS/390, VSE/ESA and UNIX.
- Entire System Server
For accessing mainframe, UNIX or Windows operating systems.
- Entire Net-work/Entire Broker
The transport layer.
- Entire System Server/Windows
For accessing the Windows operating system. On every machine to be controlled, an Entire System Server/Windows server has to be installed. This is installed as a Windows service and is administrated with the

Windows services administration.

Integration in Entire Operations

All Entire Operations concepts from mainframe environments are also available under Windows.

Analogously to mainframe NPR nodes, the Windows operating system servers are addressed via a node number which is used in addition to the node name (for example, the TCP/IP name) as a short name within Entire Operations (just as under UNIX).

Executing Operating System Functions

For executing operating system functions, there is a server of type NPR/Windows on each Windows node. This server runs as a background Windows process.

The Entire Operations Monitor and the Entire Operations online application use the following components for server communication:

- The SAT (System Automation Tools) communication layer
- The Entire Broker for transmitting client/server requests
- Entire Net-work as the transport layer
- Up to 740 Windows nodes can be served concurrently

Windows File Systems

All common Windows file systems are supported: FAT, VFAT, NTFS.

File Names

As there is no backslash (\) available on Mainframes, Windows file names can be written with slash (/) as an alternative as well, if the character sequence +F+ directly precedes the file name. This applies to file names within JCL as well.

Example

Original Windows	c:\jcl\script1.bat
Alternative representation	+F+c:/jcl/script1.bat

Sysout Redirection

From the Entire Operations Monitor, all jobs are started which redirect their output to a file. The Sysout files are stored in the Entire Operations work directory. If the job is repeated, the old sysout file is renamed.

Entire Operations Work Directory

The Entire System Server/Windows environment variable %EOR_WORK% contains the name of the Entire Operations work directory. Within this directory, the work files are stored hierarchically.

The name generation for work files under BS2000/OSD is described in the subsection Naming Conventions for Work Files Created by Entire Operations, Windows of the Entire Operations Installation and Operations Documentation.

The name of the work directory for an active network is available in the predefined symbol P-NADIR. You may store application-specific work files there, provided there are no naming conflicts with files created by Entire Operations.

Work files created by Entire Operations or by the application are deleted by the Entire Operations Monitor on network or job deactivation.

Environment Variables

You can use Windows environment variables freely within file names. This corresponds to the behaviour of BAT files. You can combine environment variables and variables from symbol tables.

Job Control

The Windows Job Control can be stored in any place. Among other places, it can be stored in Natural text members or in mainframe files. Symbol replacement and JCL generation (job type MAC) are available.

Job Start and Job Control

The Entire Operations Monitor starts jobs based on conditions and on time. Accounting data is retrieved and stored. You can manually cancel the job from the online environment.

End-of-Job Check

Entire Operations adds some 'echo' commands to the Windows job control. This allows to control certain messages in the sysout:

- Starting and ending message with timestamp
- Elapsed job time

These messages are used to check whether a job did run completely. Additionally, accounting information is retrieved. For checking the job, strings can be searched for in sysout and end-of-job check routines can be used.

End-of-Job Actions

You can send messages (for example by e-mail) to other users from the Windows node. In the Windows node definition, a program for sending mail can be defined. It is required that this program can be started from the DOS command prompt. One example for such a program is the shareware "wsendmail". All other forms of news broadcasting, such as the Entire Operations Mailbox, can still be used.

You can define printing of files and of sysout lists as an end-of-job action. For each Windows node, a Windows print command with a variable for the file name can be defined. User routines can help start further actions.

Software AG Editor

As for other platforms, the job control can be edited with the Software AG Editor on the Windows platform. Before writing the file back, the editor creates a backup copy of the edited file.

The editor is also used for displaying job sysout. The editor commands are the same as on the mainframe.