CHAPTER 3

Operating the Cisco Workload Agent for OS/390

This chapter describes how to operate the Cisco Workload Agent for OS/390, including:

- Starting the Cisco Workload Agent for OS/390
- Stopping the Cisco Workload Agent for OS/390
- Using Operator Commands
- Using Debugging Tools

Starting the Cisco Workload Agent for OS/390

Step 1 Review NSPWGO, updated during the installation process, and verify that the configuration member is specified correctly. See the "Allocating NSPWGO" section on page 2-18 for more details.

Step 2 Submit job NSPWGO to execute the Cisco Workload Agent for OS/390.

Step 3 Messages are issued indicating that the Cisco Workload Agent for OS/390 initialized successfully.

The following example shows sample display output for starting an Cisco Workload Agent for OS/390:

```
IEF403I WLA - STARTED - TIME=12.35.32
NSPW0001I 1 Cisco Workload Agent for OS/390 1.0.0B started on Wed Feb 23 17:35:33 2000
NSPW0002I 1 Copyright (C) 2000 Cisco Systems, Inc.
NSPW0003I 1 Cisco Workload Agent for OS/390 JobID:WLA   ASCB:F9AE80   ASID:22 ICAG:212A8
NSPW0004I 1 Cisco Workload Agent for OS/390 CPU:9672 SYSID=MVS001 MVS:SP6.0.8
NSPW0020I 1 Cisco Workload Agent for OS/390 initialization starting
NSPW0030I 22 Processing of Exec Parms started 824
NSPW0031I 22 Parm:"CNFG=AGENT"
NSPW0038I 22 Exec Parm Processing Completed Successfully
NSPW0040I 21 Processing of Config file:AGENT started 825
NSPW0048I 21 Processing of Config file:AGENT completed successfully
NSPW0040I 23 Processing of Config file:MAP started 826
NSPW0048I 23 Processing of Config file:MAP completed successfully
NSPW0021I 1 Cisco Workload Agent for OS/390 initialization successful
```

Stopping the Cisco Workload Agent for OS/390

Step 1 Issue the operator command **P *jobname*** from the operator's console, where *jobname* is the identifier of the batch job or task to be stopped.

Step 2 Messages are issued indicating that the Cisco Workload Agent for OS/390 stopped successfully.

The following example shows sample display output for stopping an Cisco Workload Agent for OS/390:

```
P WLA
NSPW0053I 1 "STOP" command requested by Operator
NSPW0051I 1 Cisco Workload Agent for OS/390 Termination in progress
NSPW0052I 1 Cisco Workload Agent for OS/390 Termination Complete
```

Using Operator Commands

The following is a list of operator commands you can use to control the Cisco Workload Agent for OS/390 and display information regarding the status of WLM registration.

Use the standard operator modify ‘F’ and stop ‘P’ interfaces to communicate with the Cisco Workload Agent for OS/390.

Performing an Orderly Shutdown

This command directs the Cisco Workload Agent for OS/390 to stop a job.

P ***jobname***

Syntax Description

P	Stop command identifier.
jobname	Identifier of the batch job or task to be stopped.

Examples

The following example stops job NSPWGO:

```
P NSPWGO
```

Display Agent Database Information

This command displays the Agent database information. Keyword parameters are not required.

F ***jobname*****,WLM,**
[Group=[*groupname***|***group_mask***|*]|Port=[***port_number***,count=***number_of_ports***|*]]**

Syntax Description

F	Modify command indicator.
jobname	Identifier of the batch job or task.
WLM	WLM keyword.
Group	Group keyword. The **Group** keyword is mutually exclusive with the **Port** keyword and associated parameters.
groupname	Name of a WLM groupname. A groupname can contain 1-18 characters.
group_mask	Name of a mask containing wildcard characters (* or %), used to specify one or more WLM groups. An asterisk (*) represents zero or more characters. A percent sign (%) represents a single character.
*	Display information for all groups. This is the default for the **Group** keyword.
Port	Port keyword. The **Port** keyword is mutually exclusive with the **Group** keyword and associated parameters.
port_number	Specifies a single port, or the first port for a range of ports. If you specify a *port_number*, you must also specify a **count** and *number_of_ports*.
count	Port count keyword.
number_of_ports	Specifies the number of ports to display, starting with.*port_number*. The default is 1, to display a single port.
*	Display information for all ports. This is the default for the **Port** keyword.

Defaults

Group default: * (display information for all groups)

Port default: * (display information for all ports)

Count default: 1 (display information for the single port specified)

Create a WLM Registry

This command creates a WLM registry (a database that contains system configuration information) and allows legacy applications and TCP/IP stacks to participate in load balancing. **HOST**, **GROUP**, and **SERVICE** uniquely identify a registration to the WLM and to the Cisco Workload Agent for OS/390. The *groupname* keyword must be configured in the Service Mapping Configuration member.

Note Registering for applications running on OS/390 systems other than the current system allows those applications to participate in load balancing, but distorts the WLM weights slightly. Instead, register on the system where the application is running for accurate WLM weighting.

F ***jobname*,REGister,[HOSt=*host_name*,[IP=(*ipaddr*)]],[GROup=*groupname*],[SERvice=*instance*]**

Syntax Description

F	Modify command identifier.
jobname	Identifier of the batch job or task.
REGister	Register keyword.
HOSt	Host keyword.
host_name	Host name for a stack registration. Length is 1-64 characters. There is no default value.
IP	IP keyword. Requires the **HOSt** keyword. Only specified for TCP/IP WLM registration.
ip_addr	Interface, in standard dotted notation (such as 13.6.10.10), used to register and deregister an application with the WLM.
GROup	Group keyword.
groupname	WLM groupname for service or TCP/IP stack registration. The groupname is for an application, and must appear in the MAP configuration file. Length is 1-18 characters. There is no default value.
SERvice	Service keyword.
instance	Name of service, used for control and display purposes. Length is 1-8 characters. There is no default value.

Examples

The following example shows sample display output for creating a WLM registry:

```
F WLA,REGISTER,HOST=MVS001,GROUP=WEB,SERVICE=MVS001
NSPW0068I 13 Operator Command:REGISTER,HOST=MVS001,GROUP=WEB,SERVICE=MV865
F WLA,WLM
NSPW0310I 14 Display DFP Agent WLM 868
NSPW0311I 14 Cluster:80.80.254.3  VIPA:80.80.254.3
NSPW0312I 14  Group:WEB                Port:80
NSPW0313I 14   Host:MVS001
NSPW0314I 14    Protocol:TCP  Instance:MVS001    Netid:
NSPW0315I 14     WLM Wt:01  DFP Wt:00
NSPW0312I 14  Group:TN32702            Port:24
NSPW0312I 14  Group:TN3270             Port:23
NSPW0313I 14   Host:MVS001
NSPW0314I 14    Protocol:TCP  Instance:mvs001    Netid:
NSPW0315I 14     WLM Wt:01  DFP Wt:00
NSPW0312I 14  Group:FTP                Port:21
NSPW0319I 14 End DFP Agent Display
NSPW0068I 13 Operator Command:WLM Completed Successfully 869
NSPW0052I 1 Cisco Workload Agent for OS/390 Termination Complete
```

Deregister a WLM Registry

This command deregisters a WLM registry previously specified with a **Register** command. **HOST**, **GROUP**, and **SERVICE** uniquely identify a registration to the WLM and to the Cisco Workload Agent for OS/390.

Note If a deregister is not performed when the Cisco Workload Agent for OS/390 stops, OS/390 automatically deregisters with the WLM.

F *jobname*,DERegister,[HOSt=*host_name*], [GROup=*groupname*],[SERvice=*service_name*]

Syntax Description

F	Modify command identifier.
jobname	Identifier of the batch job or task.
DERegister	Deregister keyword.
HOSt	Host keyword.
host_name	Host name for a stack deregistration. Length is 1-64 characters. There is no default value.
GROup	Group keyword.
groupname	WLM groupname for service or TCP/IP stack deregistration. The groupname is for an application, and must appear in the MAP configuration file. Length is 1-18 characters. There is no default value.
SERvice	Service keyword.
instance	Name of service, used for control and display purposes. Length is 1-8 characters. There is no default value.

Examples

The following example shows sample display output for deregistering a WLM registry:

```
F WLA,DEREGISTER,HOST=MVS001,GROUP=WEB,SERVICE=MVS001
NSPW0068I 13 Operator Command:DEREGISTER,HOST=MVS001,GROUP=WEB,SERVICE=875
```

External Tracing

This command toggles external log tracing on or off.

F *jobname*,LOGTRACE={OFF|ON}

Syntax Description

F	Modify command identifier.
jobname	Identifier of the batch job or task to be stopped.
LOGTRACE	LOGTRACE keyword. Toggles writing of external tracing. Must be set to either **ON** or **OFF**. When tracing is on, output is written to the SYSOUT log.

Using Debugging Tools

The following sections describe the diagnostic tools for use with the Cisco Workload Agent for OS/390:

- LOGTRACE Command
- Agent Database Display Command
- SVC Dumps

LOGTRACE Command

You can enable the LOGTRACE feature by editing the Cisco Workload Agent for OS/390 configuration file, or by using the **LOGTRACE** command. When LOGTRACE is on, it generates two logs, SYSPRINT, which contains logging messages, and SYSOUT, which contains error messages.

SYSPRINT records both normal and error events. SYSPRINT reports on initialization, application and stack registration and deregistration with the WLM, timer pops, socket-related events, Services Manager connection and disconnection, error events with the protocol manager, and operator commands and their output.

SYSOUT records only error conditions. Error messages are displayed with a time stamp prefix.

See the “External Tracing” section on page 3-30 for command syntax and other details.

Agent Database Display Command

The Agent Database Display command (**F** *jobname* **WLM**) lets you know which applications and stacks are currently registered with the WLM and are currently participating in load balancing.

See the “Display Agent Database Information” section on page 3-26 for command syntax and other details.

SVC Dumps

An SVC dump provides a representation of the virtual storage for the system when an error occurs. SVC dumps are created for ABEND events, and are used to help solve problems. For more information about SVC dumps, refer to *OS/390 V2R5.0 MVS Diagnosis: Tools and Service Aids*, SY28-1085.