CONTROL-M/Agent for UNIX and Microsoft Windows
Windows Administrator Guide

Supporting
CONTROL-M/Agent for Windows version 6.2.01

September 15, 2005
Contacting BMC Software

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United States and Canada

<table>
<thead>
<tr>
<th>Address</th>
<th>Telephone</th>
<th>Fax</th>
</tr>
</thead>
</table>
| BMC SOFTWARE INC  
2101 CITYWEST BLVD  
HOUSTON TX 77042-2827  
USA   | 713 918 8800  
or  
800 841 2031 | 713 918 8000 |

Outside United States and Canada

<table>
<thead>
<tr>
<th>Telephone</th>
<th>Fax</th>
</tr>
</thead>
<tbody>
<tr>
<td>(01) 713 918 8800</td>
<td>(01) 713 918 8000</td>
</tr>
</tbody>
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Customer support

You can obtain technical support by using the Support page on the BMC Software website or by contacting Customer Support by telephone or e-mail. To expedite your inquiry, please see “Before Contacting BMC Software.”

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You can obtain technical support from BMC Software 24 hours a day, 7 days a week at http://www.bmc.com/support_home. From this website, you can:

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- search a database for problems similar to yours and possible solutions
- order or download product documentation
- report a problem or ask a question
- subscribe to receive e-mail notices when new product versions are released
- find worldwide BMC Software support center locations and contact information, including e-mail addresses, fax numbers, and telephone numbers

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Before you contact BMC Software, have the following information available so that Customer Support can begin working on your problem immediately:

- product information
  - product name
  - product version (release number)
  - license number and password (trial or permanent)
- operating system and environment information
  - machine type
  - operating system type, version, and service pack or other maintenance level such as PUT or PTF
  - system hardware configuration
  - serial numbers
  - related software (database, application, and communication) including type, version, and service pack or maintenance level
- sequence of events leading to the problem
- commands and options that you used
- messages received (and the time and date that you received them)
  - product error messages
  - messages from the operating system, such as file system full
  - messages from related software
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This book describe how to implement and administer CONTROL-M/Agent for Microsoft Windows. The following table describes the chapters of this book:

<table>
<thead>
<tr>
<th>Chapter /Appendix</th>
<th>Description</th>
</tr>
</thead>
</table>
| Chapter 1 | Understanding CONTROL-M/Agent  
Introduces key features and concepts of Product Name. |
| Chapter 2 | Implementing CONTROL-M/Agent  
Describes how to  
- maintain CONTROL-M/Agent Services  
- Set user rights  
- Register users and passwords  
- Use the CONTROL-M/Agent GUI  
- Send messages to an e-mail address  
Modify and repair the CONTROL-M/Agent program |
| Chapter 3 | Writing Scripts  
Describes how to write CONTROL-M/Agent scripts. |
| Chapter 4 | Utilities  
Describes CONTROL-M/Agent command-line utilities. |
| Chapter 5 | Defining Microsoft Windows Jobs  
Describes how to set job object limits for a CONTROL-M job. |
| Appendix A | Configuration Parameters  
Describes how to set and modify configuration parameters. |
| Index | |
Related Publications

- **CONTROL-M Installation Guide** describes the installation of CONTROL-M components.

- **CONTROL-M/Server Administrator Guides** each describe setup, maintenance, security, and utilities for CONTROL-M/Server on a specific type of computer.

- **CONTROL-M Job Parameter and Variable Reference Guide** describes syntax and usage for all parameters and variables that are included in CONTROL-M job processing definitions.

- **CONTROL-M/Desktop User Guide** describes how to define and manage CONTROL-M job processing definitions, Scheduling tables, and Calendars.

- **CONTROL-M/Enterprise Manager User Guide** describes CONTROL-M/EM concepts, features, facilities, and operating instructions.

- **CONTROL-M/eTrigger Administrator Guide** describes how to trigger job submission and tracking activities using a web-based (HTML) interface.
Conventions

The following abbreviations are used in this guide:

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CM</td>
<td>CONTROL-M/Control Module</td>
</tr>
<tr>
<td></td>
<td>A product library for a specific application or operating system used by CONTROL-M/Agent to support that application or operating system.</td>
</tr>
<tr>
<td>CONTROL-M/EM</td>
<td>CONTROL-M/Enterprise Manager</td>
</tr>
</tbody>
</table>

The following conventions are used in this guide:

| key          | When describing keystrokes, angle brackets are used to enclose the name of a key (for example, F1). When two keys are joined with “+” as in Shift+F1, hold down Shift while pressing F1. |
| Menu => Option | This represents an option selection sequence. For example: Users and Groups => Groups => Add means that you first select Users and Groups from the menu bar; then select the Groups option from the submenu. Finally, select the Add option from the Groups submenu. |
| {Option A|Option B} | The vertical bar is used to separate choices. For example, when used as part of a parameter, {AND|OR} means that you specify either AND or OR. |
| [Parameter] | Square brackets are used to enclose parameters that are optional. |
| variable     | In commands and parameters, angle brackets are used to enclose variable information. For example, the command: cd <controlm_path> means that you specify cd followed by the path of CONTROL-M. |
| italic       | An italic font is used for the name of publications. |
Understanding CONTROL-M/Agent

This guide describes concepts and tools required to set up and manage CONTROL-M/Agent on Microsoft Windows computers.

CONTROL-M/Agent is a component of the CONTROL-M scheduling solution. The integration of these products is illustrated in Figure 1 on page 16.

CONTROL-M/Server handles production control and scheduling, and submits and tracks jobs across your network.

CONTROL-M/Agent submits jobs for execution on the Agent computer, monitors the jobs, and performs post-processing analysis of sysout files. The completion status of jobs and the results of post-processing analysis are transmitted back to CONTROL-M/Server.

Other CONTROL-M products are described in the documents listed in “Related Publications” on page 12.
CONTROL-M/Agent Functions

Figure 1  CONTROL-M Scheduling Solution

![CONTROL-M Scheduling Solution Diagram]

Table 1  CONTROL-M Products

<table>
<thead>
<tr>
<th>Product</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONTROL-M/EM</td>
<td>GUI-based control center from which you can manage all scheduling and workflow activities.</td>
</tr>
<tr>
<td>CONTROL-M/Server</td>
<td>Engine (on a UNIX or Microsoft Windows computer) used to drive scheduling in a data center. Each CONTROL-M/Server can manage multiple CONTROL-M/Agents on various computers.</td>
</tr>
<tr>
<td>CONTROL-M/Agent</td>
<td>Software responsible for job submission and execution. An Agent must exist on each computer that is used to execute CONTROL-M jobs.</td>
</tr>
<tr>
<td>CONTROL-M/eTrigger</td>
<td>Web-based product that creates and runs jobs under CONTROL-M using input from a web page.</td>
</tr>
<tr>
<td>CONTROL-M/Control Modules</td>
<td>CONTROL-M Control Modules enable CONTROL-M/Agents to interface with other applications (for example SAP and Oracle Applications).</td>
</tr>
</tbody>
</table>

CONTROL-M/Agent Functions

Job handling requests managed by CONTROL-M/Agent can consist of any of the following:

- instructions to submit a job on the Agent computer

- requests for information about jobs on the Agent computer that have been submitted, are currently executing, or have recently completed
requests to view or edit job script statements

requests to view job output (sysout) or job documentation

requests to stop jobs that are currently executing

In addition, CONTROL-M/Agent can handle job output (sysout) and issue Shout messages according to job processing parameters that are supplied with a job submission request.
CONTROL-M/Agent Concepts

Additional information about CONTROL-M/Agent is contained in the following table.

Table 2  CONTROL-M/Agent Information

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Installation</td>
<td>Information about installing and upgrading CONTROL-M/Agent for Microsoft Windows is described in the <em>CONTROL-M Installation Guide</em>.</td>
</tr>
<tr>
<td>Configuration</td>
<td>CONTROL-M/Agent configuration parameters are assigned values during the installation procedure.</td>
</tr>
<tr>
<td>Parameters</td>
<td></td>
</tr>
<tr>
<td></td>
<td>■ Table 18 on page 85 lists these parameters and their default values.</td>
</tr>
<tr>
<td></td>
<td>■ BMC Software recommends using the Agent Configuration utility (described on page 47) to modify these parameters.</td>
</tr>
<tr>
<td>Command-Line Utilities</td>
<td>Many CONTROL-M tasks can be implemented from a DOS command line using utilities. For more information, see Chapter 4, “Utilities.”.</td>
</tr>
<tr>
<td>Control Modules</td>
<td>A Control Module (CM) is a DLL component that enables CONTROL-M/Agent to interface with other applications in your data center. For example, the CM for SAP interfaces between CONTROL-M/Agent and SAP.</td>
</tr>
<tr>
<td></td>
<td>■ The CONTROL-M/Agent installation procedure installs a Control Module for Microsoft Windows operating systems and assigns values to its configuration parameters.</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> Control Modules are installed only on the default CONTROL-M/Agent.</td>
</tr>
<tr>
<td></td>
<td>■ Table 19 on page 88 lists these parameters and their default values.</td>
</tr>
<tr>
<td></td>
<td>■ BMC Software recommends using the Agent Configuration utility (described on page 47) to modify these parameters.</td>
</tr>
</tbody>
</table>
Server and Agent Communication

More than one CONTROL-M/Agent can reside on a computer. This enables more than one CONTROL-M/Server to communicate with different Agents on the same computer. For example, a CONTROL-M/Server can submit a job to an Agent in a test environment while another CONTROL-M/Server can send an accounts payable job to the same computer, using a different Agent.

**NOTE**

If more than one agents is installed, each agent must have different server_to_agent ports. For more information, refer to the “Agent Configuration Utility” on page 47.

CONTROL-M/Agent can be configured to work with a primary and backup CONTROL-M/Servers. In such a configuration, if the primary server fails and reverts to a backup server, the agent will revert to the same backup server.

Communicating With a Specific CONTROL-M/Agent

Each CONTROL-M/Agent that resides on the same computer has a different Server-to-Agent listening port. CONTROL-M/Server communicates with a specific CONTROL-M/Agent by referring to its listening port.

The -agent <agent name> parameter is used in CONTROL-M/Agent utilities to specify which CONTROL-M/Agent will handle that utility. The <agent name> variable represents the name of the CONTROL-M/Agent specified during the installation procedure.

For most utilities if the -agent parameter is not specified, the default CONTROL-M/Agent for that computer is used. However, if a configuration utility is run without specifying the -agent parameter, the user is prompted to select the CONTROL-M/Agent. For more information about invoking CONTROL-M/Agent utilities, see “Invoking A Utility On A Computer With Multiple Agents” on page 43.

The default CONTROL-M/Agent is determined by upgrading an earlier version of CONTROL-M/Agent, or during the installation procedure, as described in the Table 3.
After the default CONTROL-M/Agent is installed on a computer, the installation procedure prompts for a name (free text, not case sensitive) for each subsequent CONTROL-M/Agent that is installed on the same computer.

**NOTE**
Control Modules can be installed only on the default CONTROL-M/Agent.

## Agent to Server Connection Models

The following are the models with which you can connect to CONTROL-M/Server.

- Transient connection - default model used with new and upgrade installations. For more information, see “Transient connection model” on page 21.

- Persistent connection model - optional model with improved connectivity between the Server and Agent. For more information, see “Persistent connection model” on page 21.

For more information about the connection model parameters, see Table 8 on page 48.
Transient connection model

In the transient connection model, CONTROL-M/Server initiates a connection with the CONTROL-M/Agent Listener process to submit jobs and other action requests. In contrast, the Agent Tracker and Agent Utilities only open a connection to CONTROL-M/Server when they need it. Once the purpose for opening these connections is finished, the connection terminates.

However, if CONTROL-M/Server sits behind a firewall, the Agent Tracker and Agent Utilities are not able to open a connection to the server. As a result, Agent Utilities cannot be run and job statuses are updated only upon server request, approximately once every 15 minutes.

Persistent connection model

In the persistent connection model, the connection between the server and agent is constant and can be initiated by both the server and agent. Upon startup of the Agent, the Agent Router process is started and acts as a broker between the other Agent components and the Server.
The Agent Router process enables CONTROL-M/Server to maintain a constant connection with the Agent. However, when CONTROL-M/Server sits behind a firewall, the Agent Router cannot initiate the connection with the server. Once the server creates the connection to the Agent Router, the Agent Tracker and Agent Utilities processes use this connection to communicate freely with the Server.
Implementing CONTROL-M/Agent

The procedures and facilities described in this chapter enable you to keep CONTROL-M/Agent running efficiently.

The following topics are discussed in this section:

- Maintaining CONTROL-M/Agent Services
- Determining the Owner of Jobs Run on the Agent
- Verifying Communication with the Server
Maintaining CONTROL-M/Agent Services

The following CONTROL-M/Agent services are installed during the CONTROL-M/Agent installation procedure:

- CONTROL-M Listener Service
- CONTROL-M Tracker Service
- CONTROL-M Router Service
- CONTROL-M FileWatcher Service

CONTROL-M Listener and Tracker Services

The CONTROL-M Listener and Tracker services can run as Microsoft Windows background processes that are transparent to the user. These services remain active as long as Microsoft Windows is running. For more information, see “Starting and Stopping Listener and Tracker Services” on page 26.

Specifying the Agent Service and Tracker Service User Account

The Log On panel prompts you to select Local System account or This Account. For more information, see “Configuring Agent and Tracker Service Properties” on page 25.

If Local System account is selected, the service will run in the administrative group and in the native system account environment. By installation default, the following options are selected:

- (Log on as:) “Local System Account”
- “Allow service to interact with desktop”

These options enable the Agent service and Tracker service to open windows in the Microsoft Windows desktop. However, the Local System Account cannot access files across a network and cannot send a Shout message to an e-mail destination.

If the owner of any jobs run by CONTROL-M/Agent has a “Roaming Profile”, select This Account mode. If This Account is selected, specify an Administrators group user and password. The service will run in the specified user environment. The format for the value in the This Account text box is <Domain>\<User>. For more information, see “Support for Roaming Profile” on page 25.
Configuring Agent and Tracker Service Properties

**NOTE**

The administrator selected as part of This Account, must have the following permissions in the Local Security Settings window:

- Act as part of the operating system (Windows 2000 users, only)
- Increase quotas
- Replace a process level token
- Log on as a service

The service’s log on account must be a member of the Local Administrative Group.

On Windows 2000, the Act as part of operating user privilege is granted to the account.

Support for Roaming Profile

CONTROL-M/Agent support for Roaming Profile requires the following:

- The profile must reside on the network. If the network path includes the environment variable, CONTROL-M/Agent expands the path and loads the User Profile from the expanded path.

- After loading the user profile, CONTROL-M/Agent sets all environment variables from the roaming profile:
  - Logs into a different computer with the roaming user
  - Changes/adds the private environment variable
  - Logs out
  - Runs the CONTROL-M job on the original computer

- New environment variables or updated variables performed by the roaming user on any computer will be detected by the CONTROL-M job.

Configuring Agent and Tracker Service Properties

You can modify Agent service and Tracker service properties in the Log On panel of the CONTROL-M Agent (or Tracker) Properties window. BMC that the same properties be specified for both the Agent service and the Tracker service.

Before You Begin

Default values for Agent and Tracker service properties were set during the CONTROL-M/Agent installation. You can modify these properties.
How to Display and Modify CONTROL-M Agent (or Tracker) Properties


2. The Services window is displayed. Right-click `CONTROL-M Agent` or `CONTROL-M Tracker` and choose `Properties`.

3. The `CONTROL-M Agent` (or `Tracker`) Properties (Local Computer) window is displayed. Click the `Log On` tab.

4. The `Log On` panel is displayed. Select the desired properties, and click `OK`.

**CONTROL-M Router Service**

The Router service acts as a broker between different agent components and CONTROL-M/Server. For more information, refer to “Persistent connection model” on page 21.

**CONTROL-M FileWatcher Service**

BMC Software recommends that you do not make any changes to this service.

**Starting and Stopping Listener and Tracker Services**

The Listener and Tracker services operate as background processes that are not visible to the user. When the computer is turned on or rebooted, these services start automatically if the Startup Type configuration parameter is set to `Automatic`. (See “Startup Type” on page 90.) These services remain active as long as Microsoft Windows is running.

If you stop these services, you can restart them manually (as described below), or you can reboot the system (if Startup Type is `Automatic`). If the Startup Type is set to `Manual`, you must start these services manually (as described below).
You can modify the Startup Type value. BMC Software recommends that the Agent service and the Tracker service be treated the same way. The recommended Startup Type is Automatic.

**Starting CONTROL-M Agent and Tracker Services**

2. In the Administrative Tools window, click Services.
3. Select the CONTROL-M Agent service and click Start.
4. Select the CONTROL-M Tracker service and click Start.

**Stopping CONTROL-M Agent and Tracker Services**

2. In the Administrative Tools window, click Services.
3. Select the CONTROL-M Agent service and click Stop.
4. Select the CONTROL-M Tracker service and click Stop.

**Determining the Owner of Jobs Run on the Agent**

CONTROL-M/Agent runs a job in the environment of the owner of the job with the permissions granted to that owner.

The owner of a CONTROL-M/Agent job is determined by the value of the Logon As User configuration parameter. This parameter can be set either during the installation (see the CONTROL-M Installation Guide) or after the installation, as described in the Agent Configuration utility on page 47).

- If Logon As User is set to Y, the owner of the job is the owner specified in the CONTROL-M job definition.
How to Assign User Rights to Agent Users

- If Logon As User is set to N, the owner of the job is the user account for the
  CONTROL-M/Agent service:

  — Local System

  — This Account

For more information, see “Specifying the Agent Service and Tracker Service User
Account” on page 24.

The following requirements must be satisfied:

- If a user with a “Roaming Profile” will be the owner of a job, specify This Account
  (and not Local System Account) in the CONTROL-M/Agent Service Definition
  window.

- To enable a specific user to run (be the owner of) CONTROL-M jobs, the password
  of the user must be entered into CONTROL-M using the ctmpwd utility.

- The owner must have access rights to the network and the Log on as a batch job
  user right.

For information about how to assign user rights, see page 28.

---

**NOTE**

To eliminate the need to assign user rights to every job owner on every Microsoft Windows
computer running CONTROL-M/Agent, BMC Software recommends that you define a
domain-level group for all job owners. You can name this group CONTROL-M Job Owners.
Assign network access rights and the Logon as a batch job user right to this group.

How to Assign User Rights to Agent Users

You can use this procedure to assign the user rights listed on page 28 to each user
who needs them.

Assigning User Rights

1 Log on to the CONTROL-M/Agent computer as a local administrator.

2 Choose Start => Settings => Control Panel => Administrative Tools => Local Security
   Policy.

3 In the displayed tree structure, select Local Policies.
Verifying Communication with the Server

BMC Software recommends that you verify the ability of the Microsoft Windows Agent computer to communicate with the primary Server computer and with all other authorized Server host computers.

Generating the Communication Diagnostic Report

CONTROL-M/Agent includes a diagnostic program that checks parameters and environmental conditions relevant to communication between the Agent and Server computers. This program is typically used at the request of Technical Support to determine the cause of a communication problem.

How to Generate the Communication Diagnostic Report

1. Navigate to the <CONTROL-M Agent>\exe directory.
2 Enter the `ag_diag_comm` command. After several seconds, the CONTROL-M/Agent Communication Diagnostic Report is displayed.

<table>
<thead>
<tr>
<th>CONTROL-M/Agent communication Diagnostic Report</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Agent User Name</strong> : ctmagent: ** Not Administrator **</td>
</tr>
<tr>
<td><strong>Agent Directory</strong> : C:\Program Files\BMC Software\CONTROL-M Agent\Default\</td>
</tr>
<tr>
<td><strong>Agent Platform Architecture</strong> : Windows-NT 5.1 (Build: 2600)</td>
</tr>
<tr>
<td><strong>Agent Version</strong> : 6.2.01</td>
</tr>
<tr>
<td><strong>Agent Host Name</strong> : WINsrv003</td>
</tr>
<tr>
<td><strong>Server Host Name</strong> : sunsrv001</td>
</tr>
<tr>
<td><strong>Authorized Servers Host Names</strong> : sunsrv001</td>
</tr>
<tr>
<td><strong>Server-to-Agent Port Number</strong> : 7006</td>
</tr>
<tr>
<td><strong>Agent-to-Server Port Number</strong> : 7005</td>
</tr>
<tr>
<td><strong>Server-Agent Protocol Version</strong> : 06</td>
</tr>
<tr>
<td><strong>Server-Agent Comm. Protocol</strong> : TCP</td>
</tr>
<tr>
<td><strong>Server-Agent Connection mode</strong> : Transient</td>
</tr>
<tr>
<td><strong>System ping to Server Platform</strong> : Succeeded</td>
</tr>
<tr>
<td><strong>Agent ping to Control-M/Server</strong> : Succeeded</td>
</tr>
</tbody>
</table>

**Agent services status:**

`--------------------`

- **Agent Router** : Not Running
- **Agent Listener** : Running
- **Agent Tracker** : Running
- **Agent FileWatcher** : Not Running

**DNS Translation of Server** : 211.133.31.20 (In 0 seconds)

--- End of Report ---

### Sending a Shout Message to an E-mail Address

The CONTROL-M Shout facility sends messages to recipients based on specified logical destinations. For more information, see the administrator guide for CONTROL-M/Server.

CONTROL-M/Server can request CONTROL-M/Agent to send a message to an e-mail destination. If the destination is not a standard e-mail address, CONTROL-M/Agent will try to resolve the destination to an e-mail address using the Address Book of the default Windows Messaging Component (for example, Microsoft Outlook).
Requirements for Sending Shout Messages to E-mail Destinations

- The CONTROL-M/Agent service must run under the user specified in the This Account field of the Log On panel. See “Specifying the Agent Service and Tracker Service User Account” on page 24.

- The default Windows Messaging component must be installed and running on the Microsoft Windows Agent platform. This component is not installed by the CONTROL-M installation procedure.

- The user specified in the Mailbox field of the Windows Messaging Component and the user specified in the This Account field of the Log On panel must be identical.

To view or change the user in the This Account field, see “Configuring Agent and Tracker Service Properties” on page 25.

How to Configure the Mailbox Field in Microsoft Outlook

To view or change the user in the Mailbox field, close Microsoft Outlook, right-click the Microsoft Outlook icon, and choose Properties => Services (tab) => Microsoft Exchange Server => Properties.

Language Capabilities

This section provides information about CONTROL-M/Agent language support.

Western European Languages

CONTROL-M/EM, CONTROL-M/Desktop, CONTROL-M/Server, CONTROL-M/Agent, and CONTROL-M/eTrigger, support Western European language characters (the Latin-1 character set). These products can accept characters in English, German, Spanish, and French from the Latin-1 character set (ISO 8859-1) in almost all text fields and parameters.
For additional information, see the following guides.

<table>
<thead>
<tr>
<th>Task</th>
<th>Topic and Guide</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indications of which parameters do not support Western European Language special characters</td>
<td>Individual parameter descriptions in the CONTROL-M/Enterprise Manager Parameter and Variable Reference Guide</td>
</tr>
<tr>
<td>Indications of which CONTROL-M/Server and CONTROL-M/Agent utilities do not support Western European Language special characters</td>
<td>Individual utility descriptions in the CONTROL-M/Server Administrator Guide and the CONTROL-M/Agent Administrator Guide</td>
</tr>
<tr>
<td>Indications of which dialog boxes support Western European Language special characters</td>
<td>Individual descriptions of the various dialog boxes in the CONTROL-M/Enterprise Manager User Guide and the CONTROL-M/Desktop User Guide</td>
</tr>
<tr>
<td>Language configuration instructions</td>
<td>CONTROL-M Installation Guide</td>
</tr>
<tr>
<td>Upgrade and migration instructions</td>
<td>CONTROL-M Upgrade Guide</td>
</tr>
<tr>
<td>CONTROL-M/eTrigger customization instructions</td>
<td>“Use Locale” topic in Chapter 4 of the CONTROL-M/eTrigger Administrator Guide</td>
</tr>
</tbody>
</table>

CONTROL-M can run on Japanese operating systems.

The CONTROL-M components, such as the EM GUI and CONTROL-M/Desktop, do not accept Japanese characters in any free text fields or parameters and display values only in English. For example, Japanese job sysouts do not display correctly. Therefore, in these cases, job sysout analysis is not possible.

No additional customization is necessary after installation or upgrade to run CONTROL-M components with Japanese operating systems.
Writing Scripts

When operating in the Microsoft Windows environment, CONTROL-M/Agent supports the use of the following types of job scripts:

- DOS batch files (suffix .bat).
- REXX-language scripts (suffix .cmd).

CONTROL-M/Agent can use the On Statement/Code job processing parameters to perform post-processing analysis of the sysout of jobs submitted using these scripts.

The following topics are discussed in this chapter:

- Basic Guidelines
- Script Utilities
- Translating DOS Files and REXX Scripts to UNC
Basic Guidelines

Scripts analyzed by CONTROL-M/Server as part of the post-processing of a job should comply with the following requirements:

- Begin the script with the `echo on` command. This ensures that job script statements will be written to the sysout file.

- End each prompt with a `>` or `|` character. These characters and embedded spaces should not be used inside the prompt text string.

On Statement/Code Parameter

The following items describe how the On Statement/Code job processing parameter interprets script lines:

- Analysis of the Sysout for On Statement/Code

  Text in a sysout file that follows a `>` prompt or `|` prompt is treated by CONTROL-M/Server as part of the job script. All other text is treated as part of the operating system response.

  When specifying an On Statement/Code statement (format 1) in a job processing definition, place text that follows either of these prompts in the Stmt parameter. Place other text in the Code parameter.

- Continuation Lines

  CONTROL-M/Server does not process continuation lines for comparison with text in a Stmt subparameter. Therefore, do not specify script continuation line text in the Stmt subparameter.

- Length of Script Statement

  CONTROL-M/Server compares the first 512 characters of a script statement with the text in subparameter Stmt. Text after the first 512 characters of a script statement should not be in subparameter Stmt.

  The maximum length of the On Code parameter is 1024 characters.

For more information about the On Statement/Code parameter, see Chapter 7 of the CONTROL-M Job Parameter and Variable Reference Guide. Job processing parameters are described in Chapter 5 of the CONTROL-M/Enterprise Manager User Guide.
Utilization of Exit Codes by CONTROL-M/Server

Both DOS .bat scripts and REXX .cmd scripts can return an exit code to CONTROL-M/Server upon completion. The _exit utility described below is used by .bat scripts.

CONTROL-M/Server can distinguish between exit codes by using the following expression in the Code subparameter of the On Statement/Code job processing parameter:

\[
\text{COMPSTAT} = \text{<value>} 
\]

Example

In this example, a REXX script exits with an exit code of 5, as shown below:

\[
\text{exit 5} 
\]

This condition can be detected by defining the following On Statement/Code parameter:

\[
\text{Stmt: } \star \quad \text{Code: } \text{COMPSTAT}=5 
\]

Script Utilities

The _exit and _sleep script utilities can be accessed from within job scripts. These utilities are located in the <CONTRL-M/Agent>\EXE directory under the Product directory, for example:

\[
c: \Program Files\BMC Software\CONTRL-M Agent<agent name>\EXE 
\]

If this directory is not defined as part of the operating system search path, specify the full path when using one of these utilities.
This utility is similar to the UNIX `exit` built-in shell function.

The utility is located in the `<CONTRL-M/Agent>`\EXE directory path that was created during the installation procedure.

**Format**

```plaintext
_exit [<exit code>]
```

The variable `<exit code>` is any whole number ≠ 0  Default: 0

The program exits with `%errorlevel% = <exit code>`

**Examples**

- `_exit 0` in a script causes the job to end with `%errorlevel% 0`.

```plaintext
ctmcreate -tasktype command -cmdline "_exit 0"
```

- `_exit 1` in a script causes the job to end with `%errorlevel% 1`.

```plaintext
ctmcreate -tasktype command -cmdline "_exit 1"
```
This utility is similar to the UNIX `sleep` built-in shell function.

The utility is located in the `<CONTRL-M/Agent>\EXE` directory path that was created during the installation procedure.

**Format**

```
"... _sleep" <seconds>
```

The `<seconds>` variable is any whole integer number ≥ 0

If `_sleep` is specified, you must specify a whole integer number.

**Example**

Suspend execution of the script for 5 seconds.

```
c tmcreate -tasktype command -cmdline "_sleep 5"
```
Translating DOS Files and REXX Scripts to UNC

The CTMBAT2UNC utility translates DOS batch files (.bat) and REXX-language (.cmd) scripts containing mapped path names into scripts that use Universal Naming Convention (UNC) equivalents, to reference remote disk resources. These translated scripts enable CONTROL-M/Agent to execute multiple scripts simultaneously. The owners of the jobs do not have to be logged on to provide the drive mappings for the scripts.

The CTMBAT2UNC utility can be invoked using the following command:

cmbat2unc.exe <batch_file_to_translate> <output_file_name>

Table 4 describes the CTMBAT2UNC utility parameters.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;batch_file_to_translate&gt;</td>
<td>Original .bat or .cmd script</td>
</tr>
<tr>
<td>&lt;output_file_name&gt;</td>
<td>New script after translation</td>
</tr>
</tbody>
</table>

Example

Two job owners, A and B, are executing ScriptA.bat and ScriptB.bat, respectively. Owner A has drive M mapped to \nt-A\share. Owner B has drive M mapped to \nt-B\share.

Table 5 describes these scripts before and after executing the CTMBAT2UNC utility.

<table>
<thead>
<tr>
<th>Owner</th>
<th>Original Script</th>
<th>Translated Script</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>@echo off</td>
<td>@echo off</td>
</tr>
<tr>
<td></td>
<td>dir M:\jobs</td>
<td>REM Following line was changed by</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CTMBAT2UNC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>dir \nt-A\share\jobs</td>
</tr>
<tr>
<td>B</td>
<td>@echo off</td>
<td>@echo off</td>
</tr>
<tr>
<td></td>
<td>dir M:\jobs</td>
<td>REM Following line was changed by</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CTMBAT2UNC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>dir \nt-B\share\jobs</td>
</tr>
</tbody>
</table>

As shown above, every line changed by the CTMBAT2UNC utility is marked by a REM comment inserted before the translated line.
NOTE

Under the current version of Microsoft Windows, command interpreters do not change a current directory to a UNC path (for example, `cd \n\t-A\share\jobs` will not be executed). BMC Software recommends that you review the translated script after invoking the `ctmbat2unc` utility.
Utilities

Utilities are special programs that perform job definition, scheduling, and maintenance functions. These utilities can be invoked from a command line or by the Command parameter in a job processing definition.

Most of these utilities are executed in CONTROL-M/Server (see Figure 2) and are documented in the CONTROL-M/Server Administrator Guide. The remaining utilities are documented in this chapter.

Figure 2  CONTROL-M/Server Utility Workflow

NOTE

If the primary CONTROL-M/Server does not respond to a CONTROL-M/Agent request to execute a utility (other than ag_ping), the request is automatically redirected to the first non-primary Server listed in the Authorized CONTROL-M/Server Hosts parameter. If the redirection is successful, that Agent continues to work with the replacement Server.
Timeout Intervals

The Timeout for Agent utilities parameter is described on page 87. If the Agent invokes a utility that runs on the Server and there is no response within the timeout interval, the requested action will fail.

The Agent Configuration utility (see page 47) can modify this timeout interval. But, increasing this interval reduces CONTROL-M/Agent performance.

Specifying Utility Parameters

The command used to invoke a CONTROL-M utility is normally specified with all relevant parameters, for example:

```bash
ctmdefine -table cmmnads -jobname cmmls13 \ 
-tasktype command -group ecs -application test \ 
-month ALL Y -cmdline "dir \etc\passwd"
```

The total maximum length for all these parameters is 1000 characters. Using an input file enables you to:

- prepare and save files of utility parameters that can be reused.
- specify utility input longer than 1000 characters.

The utilities in Table 6 enable you to place utility parameters in an input file. In this file, each parameter and its values (if any) are on a separate line with the same syntax they would have on a command line.

<table>
<thead>
<tr>
<th>Table 6 Utilities That Support the -input_file Parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>ctmcontb</td>
</tr>
<tr>
<td>ctmcreate</td>
</tr>
<tr>
<td>ctmdefine</td>
</tr>
<tr>
<td>ctmkilljob</td>
</tr>
<tr>
<td>ctmstvar</td>
</tr>
</tbody>
</table>
Format for Command Lines With Spaces

If a command invoked from the Agent computer contains embedded spaces, add \" after the first quote at the beginning of the command, and add \" at the end of the command (but prior to any parameters).

Example

"\"d:\program files\bmc software\control-m agent\exe\sleep\" 200"

Directing Output From Utilities

Some utilities generate reports that can be directed to a file.

- If output parameters are specified, the utility output is directed to the specified file.
- If output parameters are not specified, the output is routed to the default output device (for example, the logical name of a disk).

Invoking A Utility On A Computer With Multiple Agents

All CONTROL-M/Agent utilities now support the -agent <agent name> parameter. The variable <agent name> represents the name of the CONTROL-M/Agent specified during the installation procedure.

Where multiple CONTROL-M/Agents reside on a computer, the -agent parameter determines which CONTROL-M/Agent will handle the utility. If a configuration utility is run without specifying the -agent parameter, the user is prompted to select the CONTROL-M/Agent. For all other utilities, if the -agent parameter is not specified, the default CONTROL-M/Agent is used. For more information, see “Communicating With a Specific CONTROL-M/Agent” on page 19.

Example

Assume a computer has two Agents, Default and Saturn. To add a user to Default, use the following command:

ctmpwd -action add -user user2 -password 123456 -agent Default
Utility Descriptions

To add a user to Saturn, use the following command:

```
ctmpwd -action add -user saturn_user2 -password 123456 -agent Saturn
```

Utility Descriptions

Table 7 provides a short description of the utilities that can be invoked from CONTROL-M/Agent. Some of these utilities can use the `-input_file` parameter. For more information, see “Specifying Utility Parameters” on page 42.

<table>
<thead>
<tr>
<th>Utility</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>_exit</code></td>
<td>Sets the completion status for a job run from a <code>.bat</code> file. Exit code 0 is equivalent to <code>Ended OK</code>. Any other exit code is equivalent to <code>Ended NOTOK</code>. For more data, see page 36.</td>
</tr>
<tr>
<td><code>_sleep</code></td>
<td>Determines the sleep time for all CONTROL-M/Server processes or for a specific process. For more information, see page 37.</td>
</tr>
<tr>
<td><code>ag_diag_comm</code></td>
<td>Verifies that the primary CONTROL-M/Server host is active by pinging the host through the CONTROL-M port. Displays CONTROL-M system information. For more information, see “Generating the Communication Diagnostic Report” on page 29</td>
</tr>
<tr>
<td><code>ag_ping</code></td>
<td>Tries to communicate with CONTROL-M/Server and indicates whether the attempt succeeded or failed. For more information, see page 46.</td>
</tr>
<tr>
<td><code>ctmag</code></td>
<td>Invokes the Agent Configuration utility enabling you to interactively modify CONTROL-M/Agent configuration parameters. For more information, see “Agent Configuration Utility” on page 47.</td>
</tr>
<tr>
<td><code>ctmcontb</code></td>
<td>Performs operations on the Prerequisite Conditions table. For more information, refer to the administrator guide for CONTROL-M/Server.</td>
</tr>
<tr>
<td><code>ctmcreate</code></td>
<td>Creates a job in the Active Jobs file. For more information, refer to the administrator guide for CONTROL-M/Server.</td>
</tr>
<tr>
<td><code>ctmdefine</code></td>
<td>Creates job processing definitions. For more information, refer to the administrator guide for CONTROL-M/Server.</td>
</tr>
<tr>
<td><code>ctmfw</code></td>
<td>Detects completion of file transfer activity. For more information, see page 55.</td>
</tr>
</tbody>
</table>
### Table 7  CONTROL-M/Agent Utilities (Part 2 of 2)

<table>
<thead>
<tr>
<th>Utility</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ctmkilljob</td>
<td>Terminates an executing CONTROL-M job and all of its associated processes. For more information, refer to the administrator guide for CONTROL-M/Server.</td>
</tr>
<tr>
<td>ctmloadset</td>
<td>Updates a Quantitative resource in the Resources table. You must provide all the required parameters on the command line. For more information, refer to the administrator guide for CONTROL-M/Server.</td>
</tr>
<tr>
<td>ctnodegrp</td>
<td>Views and maintains node groups. For more information, see the utilities chapter in the administrator guide for CONTROL-M/Server.</td>
</tr>
<tr>
<td>ctmorder</td>
<td>Orders or forces one or more jobs from a CONTROL-M scheduling table. For more information, see the CONTROL-M/Server Administrator Guide.</td>
</tr>
<tr>
<td>ctmpsm</td>
<td>The ctmpsm utility is invoked silently to display the CONTROL-M Production Support menu. For more information, refer to the administrator guide for CONTROL-M/Server.</td>
</tr>
<tr>
<td>ctmpwd</td>
<td>Maintains CONTROL-M user and password information. For more information, see page 66. (This utility replaces the ctmcp utility in earlier versions.)</td>
</tr>
<tr>
<td>ctmshout</td>
<td>Issues a shout message to a specified destination. For more information, see the administrator guide for CONTROL-M/Server.</td>
</tr>
<tr>
<td>ctmstvar</td>
<td>Displays the current value of an AutoEdit variable or function.</td>
</tr>
<tr>
<td>ctmudly</td>
<td>Orders jobs for a specific User Daily name. For more information, see the administrator guide for CONTROL-M/Server.</td>
</tr>
<tr>
<td>ctmvar</td>
<td>Maintains AutoEdit variables. For more information, see the administrator guide for CONTROL-M/Server.</td>
</tr>
<tr>
<td>Note: The value of parameter <code>-filename</code> is the full path and name of a file that is accessible to CONTROL-M/Server.</td>
<td></td>
</tr>
<tr>
<td>ctmwincfg</td>
<td>Interactively maintains Control Module configuration parameters. For more information, see page 47.</td>
</tr>
<tr>
<td>ecactltb</td>
<td>Displays a list of Control resources and the status of each one. For more information, see the administrator guide for CONTROL-M/Server.</td>
</tr>
<tr>
<td>ecaqrtab</td>
<td>Performs operations on the Quantitative resources table. You must provide all the required parameters on the command line. For more information, see the administrator guide for CONTROL-M/Server.</td>
</tr>
</tbody>
</table>
**ag_ping Utility**

This utility verifies that CONTROL-M/Server is active on the Server computer connected to the Agent computer. From the operating system prompt, specify the following command:

```
ag_ping
```

The utility attempts to communicate with CONTROL-M/Server and indicates whether the attempt succeeded or failed. If the attempt succeeds, you will receive the message:

```
Output:
Server is alive.
Result: Success.
```
Agent Configuration Utility

The Agent Configuration utility is a Java application used to maintain CONTROL-M/Agent configuration parameters, and to view and modify most of the operating system parameters. This utility replaces the ctmagcfg and ctmwincfg utilities.

**NOTE**
For information about running the Agent Configuration utility as command line utilities, refer to “Command Line Utilities” on page 53.

There are additional tabs that represent each of the Control Modules (CMs) installed on the agent.

This utility is located at `<CONTROL-M Agent>\EXE\ctmag` and can be run from either the command prompt or Windows Explorer. A window similar to the following is displayed:

![Agent Configuration Management](image)

**NOTE**
If more than one agent is installed, use the `ctmag <agent name>` command when opening the Agent Configuration utility from the command line.
**Agent tab**

Table 8 lists the parameters displayed in the Agent tab and their descriptions.

---

**NOTE**

Right-clicking on a field label and selecting Help About provides context sensitive help for that field.

---

### Table 8  ctmag Utility Parameters (Part 1 of 2)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Attributes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Agent-to-Server Port Number</strong></td>
<td>CONTROL-M/Server and CONTROL-M/Agent communicate by means of two TCP/IP ports. This parameter specifies the port in the Server platform that receives data from the Agent platform. The value specified must match the value assigned to the Agent-to-Server Port Number parameter on the Server platform. Verify that the specified port number is not used for any other purpose in the Agent. Specify a numeric value from 1025 to 65535, inclusive. Default: 7005</td>
</tr>
<tr>
<td><strong>Server-to-Agent Port Number</strong></td>
<td>CONTROL-M/Server and CONTROL-M/Agent communicate by means of two TCP/IP ports. This parameter specifies the port in the Server platform that sends data to the Agent platform. The value specified must match the value assigned to the Server-to-Agent Port Number parameter on the Server platform. Verify that the specified port number is not used for any other purpose in the Agent platform. Specify a numeric value from 1025 to 65535, inclusive. Default: 7006</td>
</tr>
<tr>
<td><strong>Primary CONTROL-M/Server Host</strong></td>
<td>Host computer for the CONTROL-M/Server that handles this Agent. Type the name of the primary CONTROL-M/Server host in the field or select a host name from the drop-down list. Default: Computer on which the installation was made. <strong>Note:</strong> Do not use a numeric IP address, such as 173.19.6.14, to specify the name of the server.</td>
</tr>
<tr>
<td><strong>Authorized CONTROL-M/Server Hosts</strong></td>
<td>Names of all CONTROL-M/Servers authorized to handle this Agent (including the primary Server). Specify the host names separated with the “</td>
</tr>
<tr>
<td><strong>Diagnostic Level</strong></td>
<td>Flag that indicates whether to generate diagnostic messages. Valid values: 0–4. Level 0 generates no diagnostics. Level 4 generates maximum diagnostics. This parameter can only be changed after completing the installation.</td>
</tr>
</tbody>
</table>
Changes to the Diagnostic Level parameter are saved and take effect immediately. If you change any other parameter, the configuration parameters are saved and CONTROL-M/Agent is restarted.

**Agent tab (Advanced)**

Table 8  
ctmag Utility Parameters (Part 2 of 2)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Attributes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication Trace</td>
<td>Flag that indicates whether to debug communications between CONTROL-M/Agent and CONTROL-M/Server. Valid values are:</td>
</tr>
<tr>
<td></td>
<td>- 0 = No. Default.</td>
</tr>
<tr>
<td></td>
<td>- 1 = Yes.</td>
</tr>
<tr>
<td></td>
<td>This parameter can only be changed after completing the installation.</td>
</tr>
<tr>
<td>Days To Retain Log Files</td>
<td>Numbers of days that Agent proclog files are retained. After this period, all Agent proclog files are deleted by the New Day procedure. Default: Same as the <strong>Max. Days to Retain Sysout Files</strong> system parameter.</td>
</tr>
<tr>
<td>Daily Log File Enabled</td>
<td>Indicates whether the <code>ctmag_&lt;year&gt;&lt;month&gt;&lt;day&gt;.log</code> file is generated. Valid values are:</td>
</tr>
<tr>
<td></td>
<td>- Y - Yes. Default</td>
</tr>
<tr>
<td></td>
<td>- N - No.</td>
</tr>
</tbody>
</table>
Table 9 lists the parameters found under the Advanced Agent window of the Agent tab and their descriptions.

**NOTE**
Right-clicking on a field label and selecting Help About provides context sensitive help for that field.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Attributes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TCP/IP Timeout</td>
<td>Communication timeout in seconds. Specify a numeric value greater than or equal to zero. Default: 60</td>
</tr>
<tr>
<td>Tracker Polling Interval</td>
<td>Time in seconds that the Tracker waits after starting the job status checking process before re-starting that process. This parameter can only be changed after completing the installation. Default: 60 (seconds).</td>
</tr>
<tr>
<td>AutoEdit Inline</td>
<td>Flag that indicates whether AutoEdit variables defined in a CONTROL-M job are set as Environment variables in the user job environment. This parameter can only be changed after completing the installation. Valid values: Y = AutoEdit variables are set. N = AutoEdit variables are not set. Default.</td>
</tr>
<tr>
<td>CTMS Address Mode</td>
<td>If this parameter is set to IP, the IP address instead of the host name is saved in CTMS_HOSTNAME. Use this parameter when CONTROL-M runs on a platform with more than one network card.</td>
</tr>
<tr>
<td>Timeout for Agent utilities</td>
<td>Maximum time (in seconds) the Agent waits after sending a request to CONTROL-M/Server. This timeout interval should be longer than the TCP/IP Timeout. Recommended value and default: 600</td>
</tr>
<tr>
<td>Persistent Connection</td>
<td>Determines in what mode the agent will run. Default: No</td>
</tr>
<tr>
<td>Allow_Comm_Init</td>
<td>Determines whether the Agent Router can initiate a session with the server. Default: Yes</td>
</tr>
<tr>
<td></td>
<td>If the server sits behind a firewall, this parameter should be set to No.</td>
</tr>
<tr>
<td>Common Event Mechanism</td>
<td>Flag for specifying if all control modules, not just the default control module, should be able send messages to the Tracker process without waiting for the tracker polling interval. Messages are sent using the port specified in the Tracker Port parameter to inform the Tracker that a job status changed. Valid values are:</td>
</tr>
<tr>
<td></td>
<td>Y = Use the Common Event Mechanism. Default.</td>
</tr>
<tr>
<td></td>
<td>N = Do not use the Common Event mechanism. Only the default control module can send messages directly to the Tracker process.</td>
</tr>
<tr>
<td></td>
<td>Note: When CONTROL-M/Agent is upgraded from a prior version, the default is N for backward compatibility.</td>
</tr>
</tbody>
</table>
## Table 9  ctmag (Advanced tab) - Utility Parameters (Part 2 of 2)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Attributes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tracker Port</td>
<td>Number of the port for sending messages to the Tracker process when jobs status changes. The tracker event port enables CONTROL-M/Agent to receive updates regarding job status from all Control Modules associated with the current CONTROL-M/Agent. This parameter is used in conjunction with the Common Event Mechanism parameter. Default: 7009</td>
</tr>
</tbody>
</table>
| Listen to Net Card | The network name or IP address for CONTROL-M/Agent for Microsoft Windows 2000 support of multiple IP interfaces (network cards) for a single computer. Valid values are:  
  - The network name or IP address of a specific card.  
  - The reserved value *ANY for all network cards.  
  This helps ensure that CONTROL-M/Agent will receive requests regardless of which IP interface is used to send those requests. |
| SSL              | SSL support for CONTROL-M/Agent for Microsoft Windows. When SSL support is implemented in CONTROL-M/Server it makes a one-time request to set this parameter automatically for each associated Agent. This request requires 2 to 5 minutes for each Agent. Setting this parameter manually can save time if a large number of Agents work with CONTROL-M/Server. For more information about setting this parameter manually, see “Agent Configuration Utility” on page 47. |
| Protocol version | Server-Agent communication protocol version. Default: 06                                                                                                                                                   |

---

**NOTE**

You can also access the ACU application by clicking on the ACU button located at the bottom of the Agent tab. For more information about ACU, refer to “Agent Check utility” on page 69.

---

**Win CM tab**

The parameters in the Win CM tab are described in Appendix A. If the parameter you want to modify is not listed, see the “Agent Configuration Utility” on page 47.
Specify values for the parameters you want to change. If you quit without saving, settings are not saved. If you save but do not quit, settings are saved anyway.

**NOTE**
Right-clicking on a field label and selecting Help About provides context sensitive help for that field.

**CM tab**

In the past, to configure a CM, you had to run the management applications for each CM separately. In the Agent Configuration utility, you can manage all of the applications using the relevant CM's tab.

When you install a CM, a *cm_name*.xml data file is placed in the DATA\GUI directory. The Agent Configuration utility reads each data file and creates a tab for the CM with each of the CM management applications.

For information about each of the CM management applications, refer to the relevant CM documentation.
Command Line Utilities

This section describes the agent configuration command line utilities.

ctmagcfg

This section provides information about running the ctmagcfg utility from the command line.

**NOTE**

This utility can also be accessed as a Java application. For more information, refer to the “Agent tab” on page 48.

To access the ctmagcfg utility, enter `ctmagcfg` from a command prompt.
For an explanation of the parameters in the ctmagcfg utility, refer to Table 8 and Table 9.

**ctmwincfg**

This section provides information about the ctmwincfg utility.

**NOTE**

This utility can also be accessed as a Java application. For more information, refer to the “Win CM tab” on page 51.
To access the ctmwincfg utility, enter `ctmwincfg` from a command prompt.

<table>
<thead>
<tr>
<th>Agent Configuration Utility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agent Name: Default</td>
</tr>
<tr>
<td>CM Name: WIN</td>
</tr>
<tr>
<td>CM Type: WIN2K</td>
</tr>
<tr>
<td>1) Logon As User (Y/N)</td>
</tr>
<tr>
<td>2) Logon Domain</td>
</tr>
<tr>
<td>3) Domain Controller</td>
</tr>
<tr>
<td>4) Default Printer</td>
</tr>
<tr>
<td>5) E-mail User Account</td>
</tr>
<tr>
<td>6) E-mail User Account Password</td>
</tr>
<tr>
<td>7) Add Job Object statistics to Sysout (Y/N)</td>
</tr>
<tr>
<td>8) Sysout Name (MEMNAME</td>
</tr>
<tr>
<td>9) Job children inside job object (Y/N)</td>
</tr>
<tr>
<td>10) Wrap parameters with double quotes (1-4)</td>
</tr>
<tr>
<td>11) Run user 'Logon Script' (Y/N)</td>
</tr>
<tr>
<td>12) CD to user 'Home Dir' (Y/N)</td>
</tr>
</tbody>
</table>

s) Save and Restart CONTROL-M/Agent Services
q) Quit

Enter your choice:

For a description of the parameters in the ctmwincfg utility, refer to Appendix A. If the parameter you want to modify is not listed, see the “Agent Configuration Utility” on page 47.

**ctmfw Utility (File Watcher)**

The File Watcher utility, `ctmfw`, can be used to detect the

- successful completion of a file transfer activity
- creation of a file
- deletion of a file

`ctmfw` can be used before activating a job or before performing a task (for example, sending a shout message or adding and deleting conditions) that is dependent upon creation or deletion of a file.

The `ctmfw` utility runs as a process on a client machine. The process waits for the creation or deletion of specified files.
For a file transfer activity, when the file is detected, the job continues to monitor the size of the file. When the file reaches a specified minimum size and does not increase in size for a specified period of time, the File Watcher utility either completes with a status of **OK** or executes a specified **DO** action. **DO** actions can consist of adding or deleting conditions or executing a command.

For file creation, file size is ignored if a wildcard is specified as part of the filename unless the mon_size_wildcard parameter is set to **Y**.

For file deletion, ctmfw must first detect the existence of the file before it can detect its deletion.

The ctmfw utility can also be run from the command line, or be invoked to detect either a single file or multiple files.

**Usage as a Service**

As a service, ctmfw takes its parameters (rules) during startup from the **rull.dat** file whose full path name is specified in `<CONTROL-M/Agent>\data\ctmfw.cfg`.

To change one or more rules, change the contents of the **rull.dat** file or specify the full path name of a different file.

*NOTE*

The **rull.dat** file provided with CONTROL-M/Agent is a sample file and should be changed to reflect your requirements.

The full path name to the **ctmfw.cfg** configuration file must be specified under the following Microsoft Windows registry key that is generated automatically by the installation script:

```
HKEY_LOCAL_MACHINE\SOFTWARE\BMC Software\CONTROL-M\FileWatcher\SYSPRM\File Watcher Configuration File
```

The default value for this key is

```
<CONTROL-M/Agent.install_directory>\DATA\ctmfw.cfg
```

*NOTE*

BMC Software recommends that this default value not be changed.
The configuration file must contain the following line:
```
.input <rule_file_name>
```

The variable `<rule_file_name>` is the full path name of a rule file containing the File Watcher rules. The following is a sample rule file.

**Figure 3  Sample Rull.dat file**
```
INTERVAL 5
FROM_TIME 0001
MIN_SIZE 50
MIN_DETECT 5
WAIT_TIME 2
ON_FILEWATCH NONEXIST CREATE 10 3 1
THEN
DO_CMD "BAD FILE WAS CREATED IN 1 MINUTE"
ELSE
DO_CMD "GOOD FILE WAS NOT CREATED IN 1 MINUTE"
END_ON
```

**Network Resources**

The FileWatcher service running under the local system account cannot detect network resources (files located on remote systems). If you want the File Watcher to detect network resources, configure the FileWatcher Service to run under a regular user account.

**FileWatcher Service Trace**

When running as a service, `ctmfw` generates an execution log file. This file is saved in the CONTROL-M/Agent `proclog` directory under the following name:

```
U_CTMFW_<process_id>.log
```

By default, logs in the `proclog` directory are retained for 3 days. If the “maximum days to retain sysout” parameter is set to a number higher than 3, logs are retained for the number of days specified in that parameter.
Usage as a Utility

When running as a utility, ctmfw is invoked from the command line. Rules can be provided on the command line or by a rule file.

Sample trace file

Figure 4  Sample Trace File Output

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>User ID</th>
<th>Event Type</th>
<th>Event Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002/03/10</td>
<td>13:04:24</td>
<td>182</td>
<td>FW:set</td>
<td>INTERVAL=3</td>
</tr>
<tr>
<td>2002/03/10</td>
<td>13:04:24</td>
<td>182</td>
<td>FW:set</td>
<td>MIN_SIZE=4</td>
</tr>
<tr>
<td>2002/03/10</td>
<td>13:04:24</td>
<td>182</td>
<td>FW:set</td>
<td>FROM_TIME=0909</td>
</tr>
<tr>
<td>2002/03/10</td>
<td>13:04:24</td>
<td>182</td>
<td>FW:ctmw:command</td>
<td>'ON_FILEWATCH tst CREATE'(arg#=3)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>line</td>
<td>id=1</td>
</tr>
<tr>
<td>2002/03/10</td>
<td>13:04:24</td>
<td>182</td>
<td>FW:ctmw:command</td>
<td>'ON_FILEWATCH prd CREATE 0 0 1 NOW 10'(arg#=8) id=2</td>
</tr>
<tr>
<td>2002/03/10</td>
<td>13:04:24</td>
<td>182</td>
<td>FW:ctmw:command</td>
<td>'ON_FILEWATCH abc DELETE 0 0 1 NOW 10'(arg#=8) id=3</td>
</tr>
<tr>
<td>2002/03/10</td>
<td>13:04:24</td>
<td>182</td>
<td>FW:File 'test'</td>
<td>exists, its current size is 265.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>id=1</td>
</tr>
<tr>
<td>2002/03/10</td>
<td>13:04:24</td>
<td>182</td>
<td>FW:File 'test'</td>
<td>has reached the minimum size of 4.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>size=265 bytes id=1.</td>
</tr>
<tr>
<td>2002/03/10</td>
<td>13:04:24</td>
<td>182</td>
<td>FW:File 'abc'</td>
<td>does not exist.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>id=3</td>
</tr>
<tr>
<td>2002/03/10</td>
<td>13:04:36</td>
<td>182</td>
<td>FW:File transfer</td>
<td>was completed. The size of file 'test' is 265.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>id=1</td>
</tr>
<tr>
<td>2002/03/10</td>
<td>13:04:36</td>
<td>182</td>
<td>FW:Executing:</td>
<td>&lt;ctmcontb add 'aaa' '0101'&gt;</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>&lt; dir &gt;</td>
</tr>
<tr>
<td>2002/03/10</td>
<td>13:05:09</td>
<td>182</td>
<td>FW:Executing:</td>
<td>&lt;ctmcontb add 'aaa' '0101'&gt;</td>
</tr>
<tr>
<td>2002/03/10</td>
<td>13:05:27</td>
<td>182</td>
<td>FW:File 'prd'</td>
<td>was not CREATED within the time limit.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>id=2</td>
</tr>
<tr>
<td>2002/03/10</td>
<td>13:05:27</td>
<td>182</td>
<td>FW:File 'prd'</td>
<td>will be scanned at 1315.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>id=2</td>
</tr>
<tr>
<td>2002/03/10</td>
<td>13:05:27</td>
<td>182</td>
<td>FW:File 'abc'</td>
<td>was not DELETED within the time limit.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>id=3</td>
</tr>
<tr>
<td>2002/03/10</td>
<td>13:05:27</td>
<td>182</td>
<td>FW:File 'abc'</td>
<td>will be scanned at 1315.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>id=3</td>
</tr>
<tr>
<td>2002/03/10</td>
<td>13:05:30</td>
<td>182</td>
<td>FW:File 'prd',</td>
<td>is out of time window. next time:1315,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>id=2</td>
</tr>
<tr>
<td>2002/03/10</td>
<td>13:05:30</td>
<td>182</td>
<td>FW:File 'abc',</td>
<td>is out of time window. next time:1315,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>id=3</td>
</tr>
<tr>
<td>2002/03/10</td>
<td>13:15:01</td>
<td>182</td>
<td>FW:File 'prd',</td>
<td>entered the time window from '1315' for monitoring.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>id=2</td>
</tr>
<tr>
<td>2002/03/10</td>
<td>13:15:01</td>
<td>182</td>
<td>FW:File 'abc',</td>
<td>entered the time window from '1315' for monitoring.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>id=3</td>
</tr>
</tbody>
</table>
To watch a single file

The syntax of the ctmfw utility is

```
ctmfw FILE (absolute path)  Default: CREATE
< mode (CREATE|DELETE)>  Default: CREATE
< minimum detected size <number>  Default: 0
[' ' | Bytes(B)| Kilo(K)| Mega(M)| Giga(G) ]
< interval between file search (seconds) > Default: 60sec
< interval between filesize comparison iterations (seconds) >
Default: 10sec
< number of iterations while the size is static > Default: 3 iterations
< time limit for the process (minutes). Default: 0 (no time limit)
Effective while the file does not exists or, the file size is static and the minimum size
was not creached >
< monitor file size when wildcard is used > Default: N
< starting time for detecting files (HHMM or YYYYMMDDHHMM >
Default: NOW
< absolute stop time (HHMM or YYYYMMDDHHMM > Default: 0 (No stop time)
< minimal age of file ( modified time )
    format:xxxxYxxxxMxxxxDxxxxHxxxxMin > Default: 0
```

The parameters of the ctmfw utility are described in Table 10.

All parameters have to be assigned a value, even if that value is zero. If only six values are specified, the default value for `mon_size_wildcard` is used. If five parameters are specified, default values for `wait_time` and `mon_size_wildcard` are used, and so forth.

--- EXAMPLE ---

```
ctmfw c:\watchedfile.txt CREATE 100 10
```

is resolved using default values for `mon_int`, `min_detect`, `wait_time`, and `mon_size_wildcard` as follows:

```
ctmfw c:\samplefile.txt CREATE 100 10 3 0 N
```

### Table 10  ctmfw – Parameters (Part 1 of 3)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FILE</td>
<td>Path of the file to be detected. The file name can include mask character * to represent any number of characters (including no characters) or ? to represent any one character.</td>
</tr>
</tbody>
</table>
### ctmfw – Parameters (Part 2 of 3)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
</table>
| mode                            | **CREATE** Detects creation of a file. Default. File size is ignored if the filename parameter contains wildcards (unless the **monitor file size when wildcard is used** parameter is set to **Y**).  

**Note:** If a mask is specified for the filename, and the **monitor file size when wildcard is used** parameter is set to  
- N, the ctmfw utility will end **OK** after detection of the first file that matches the specified mask.  
- Y, the ctmfw utility will end **OK** after detection of the first file that matches the filename and file size.  

For more information about **monitor file size when wildcard is used**, see below.  

**DELETE** Detects deletion of a file. When the ctmfw utility is run in this mode, it first checks for files that match the specified name. After a specified file is detected, the ctmfw utility checks at the specified interval for deletion of that file.  

**Note:** If a mask is specified as the filename, the ctmfw utility will end successfully only after all detected files that match the specified mask have been deleted. |
| minimum detected size           | Minimum file size in bytes. This parameter is ignored if the **FILE** parameter contains wildcards (unless the **monitor file size when wildcard is used** parameter is set to **Y**) or if the mode parameter is set to **DELETE**. Default: 0 (any size detected). |
| interval between file searches  | Interval between successive attempts to detect the existence/deletion of a file (in seconds). Default: 60 |
| interval between filesizecomparison iterations | Interval between attempts to monitor the size of a file after it is detected (in seconds). This parameter is ignored when using wildcards in **FILE** or when using **DELETE** mode. Default: 10 |
| number of iterations while size is static | Number of attempts to monitor file size where the size remains static and greater than or equal to **minimum detected size** (indicating successful creation of the file). This parameter is ignored when using wildcards in **FILE** or when using **DELETE** mode. Default: 3 |
| time limit for the process      | Maximum time (in minutes) to run the process without detecting the file at its minimum size (**CREATE**) or detecting its deletion (**DELETE**). If the file is not detected/deleted in this specified time frame, the process terminates with an error return code, as described in Table 13. Default: 0 (no time limit). |
| monitor file size when wildcard is used | Indicates whether file size should be monitored if the filename contains wildcards. This parameter is ignored if the filename does not contain a wildcard. Valid values:  
- Y – monitor the file size.  

If this parameter is set to Y and more than one file matches the specified mask, the ctmfw utility randomly selects one matching file, monitors its file size, and ignores all other matching files. |
To watch multiple files

Use the following command to invoke the ctmfw utility for multiple files

```
ctmfw -input <rule_file_name>
```

The variable `<rule_file_name>` is the complete path name of the file containing the definitions for each file to be detected.

**Sample Rule File**

Figure 5 displays a sample rule file. In this sample:

- `#` indicates comments.
- Default values are shown for all global parameters.
- `<action>` refers to any of the actions described in Table 12.
Figure 5  Sample Rule file

```plaintext
#******************************************************************************
# Global Parameters
INTERVAL <60>  # Sleep interval (seconds)
MIN_SIZE 4Kilo
MIN_AGE 3M24D4h5min
FROM_TIME <0000>  # Starting time for all files (hh:mm)
MIN_SIZE <0>  # Minimum size for all files (bytes)
MIN_DETECT <3>  # Number of iterations for all files
WAIT_TIME <0>  # Time limit for all files (minutes)

# ON_FILEWATCH statements
ON_FILEWATCH <filename> (absolute path) [CREATE/DELETE] [min_size] [min_detect]
[wait_time]
[start_time] [cyclic_interval] [wildcards] [minimal_file_age]
THEN
<action>
ELSE
<action>
END_ON
#******************************************************************************
```

**NOTE**
All global parameters must be delimited by the new line character.

The rule file contains two sections:

- Global parameters, whose default values apply to all the files in the rule file.

- **ON_FILEWATCH** statements identifying which files to detect, specific criteria for each file, and the action to take upon detection or non-detection. Any number of **ON_FILEWATCH** statements can appear in a rule file.

**NOTE**
All keywords must be entered in uppercase.

| Table 11  Rule file Global Parameters (Part 1 of 2) |
|----------- |--------------------------------------------------|
| Parameter  | Description                                      |
| INTERVAL  | Sleep interval (in seconds) between successive scans for all the files. This parameter replaces individual `sleep_int` and `mon_int` parameters for each file. Default: 60 |
| MIN_SIZE  | Minimum file size in bytes. This parameter is ignored if the `FILE` parameter contains wildcards (unless the `monitor file size when wildcard is used` parameter is set to `Y`) or if the mode parameter is set to `DELETE`. Default: 0 (any size detected). |
If any mandatory parameter is omitted from a rule file, the default value for that parameter is used. Parameters entered for `ON_FILEWATCH` statements override the default values. If entered, they must appear in the order shown in Figure 5.

### Table 11  Rule file Global Parameters (Part 2 of 2)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIN_AGE</td>
<td>Indicates the minimum amount of time that needs to have passed since the file you want to watch was last modified. For example, <code>2y3d5h</code> means that 2 years, 3 days, and 5 hours must pass before the file will be detected.</td>
</tr>
<tr>
<td></td>
<td>This parameter is ignored if the mode parameter is set to DELETE. Default: 0</td>
</tr>
<tr>
<td>FROM_TIME</td>
<td>Starting time for detecting all the files (default FROM_TIME). Used with WAIT_TIME to identify the time frame for detecting and monitoring the files. This parameter is expressed in 24-hour, hhmm format. Default: 0000 or Now</td>
</tr>
<tr>
<td>STOP_TIME</td>
<td>Indicates an absolute time at which the file is no longer watched. For example, 200502061400, means that at 2 PM on February 6th, 2005 the FileWatcher utility will stop watching the file.</td>
</tr>
<tr>
<td></td>
<td>You can also use the HHMM format, which uses the current date, plus the HHMM entered. Default: 0 (meaning, no stop time)</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> STOP_TIME can only be used as a global parameter.</td>
</tr>
<tr>
<td>CYCLIC_INTERVAL</td>
<td>Indicates the interval between multiple operations of detecting the file (in minutes). This interval must be greater than the value for WAIT_TIME. If the cyclic_interval is 0, only one attempt to detect the file will be performed. Default: 0</td>
</tr>
<tr>
<td>MON_SIZE_WILDCARD</td>
<td>Indicates whether file size should be monitored if the filename contains wildcards. This parameter is ignored if the filename does not contain a wildcard. Valid values: N – do not monitor file size. Default.</td>
</tr>
<tr>
<td></td>
<td>Y – monitor the file size.</td>
</tr>
<tr>
<td></td>
<td>If this parameter is set to Y and more than one file matches the specified mask, the ctmfw utility randomly selects one matching file, monitors its file size, and ignores all other matching files.</td>
</tr>
</tbody>
</table>

**NOTE**

For a description of the ON_FILEWATCH parameters, refer to Table 10 on page 59.

If any mandatory parameter is omitted from a rule file, the default value for that parameter is used. Parameters entered for `ON_FILEWATCH` statements override the default values. If entered, they must appear in the order shown in Figure 5.

### Table 12  ctmfw – Valid Actions

<table>
<thead>
<tr>
<th>Action</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DO_COND &lt;condition name&gt; &lt;condition date&gt; &lt;+</td>
<td>-&gt;</td>
</tr>
<tr>
<td>DO_CMD &lt;command&gt;</td>
<td>Execute a valid command under the command interpreter. Full path names are required for files.</td>
</tr>
</tbody>
</table>
If the file is detected and the size remains static within the time frame (CREATE) or the file has been deleted (DELETE), the DO commands in the THEN block are executed.

If the file is not detected or deleted within the time frame, the statements following the ELSE block are executed.

ctmfw terminates when all the files in the rule file have been processed.

**NOTE**

If an ON_FILEWATCH statement contains a cyclic_interval parameter, ctmfw will only stop monitoring a file on a DO_OK or DO_NOTOK action.

### Table 12  ctmfw – Valid Actions

<table>
<thead>
<tr>
<th>Action</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DO_OK</td>
<td>Terminate ctmfw with status OK. If there is more than one file in the Rule file, the result displayed is that of an AND algorithm.</td>
</tr>
<tr>
<td>DO_NOTOK [exit code]</td>
<td>Terminate ctmfw with status NOTOK. Exit code is optional and replaces the standard return code, as described in Table 13.</td>
</tr>
</tbody>
</table>

Example 1

The ctmfw utility is invoked to watch multiple conditions. The definitions the ctmfw utility uses for watching each file are contained in a rule file.

The following instructions are defined in the rule file:

- The sleep interval between succeeding scans must be 10 seconds.
- If the ctmfw utility detects that the file datafile.txt in directory c:\controlm is created in the specified time interval, then:
  - condition datafile dated 1 January must be added.
  - The command interpreter must execute the command to move the contents of the c:\ctm\datafile.txt to c:\ctm\workfile.txt file.
- If the ctmfw utility detects that the datafile.txt file in the c:\controlm directory is not created in the specified time interval, then condition datafile dated 1 January must be deleted.
- When the ctmfw utility detects that the c:\ctm\tempfile.txt file is deleted, condition tempfile dated 1 January must be deleted.
Example 2

A job processing definition is created to implement a File Watcher job. The file must arrive between 19:00 and 22:00, and be created in the \tmp directory under the name trans.dat. The minimum file size is 100 bytes. The detection process should be performed each minute. The file size monitored every 10 seconds, and the number of intervals where the file size remains static is 5. If the file is not detected by 22:00, an alert should be sent to CONTROL-M/Enterprise Manager.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job Name</td>
<td>FileWatch</td>
</tr>
<tr>
<td>Mem Name</td>
<td>FileWatch</td>
</tr>
<tr>
<td>Owner</td>
<td>&lt;control_m_user&gt;</td>
</tr>
<tr>
<td>From Time</td>
<td>1900</td>
</tr>
<tr>
<td>Command line</td>
<td>ctmfw &quot;\tmp\trans.dat&quot; CREATE 100 60 10 5 180</td>
</tr>
<tr>
<td>Stmt</td>
<td>*</td>
</tr>
<tr>
<td>Code</td>
<td>COMPSTAT=0</td>
</tr>
<tr>
<td>Do Cond</td>
<td>file_trans_dat_ok Date: ODAT Sign: +</td>
</tr>
<tr>
<td>Stmt</td>
<td>*</td>
</tr>
<tr>
<td>Code</td>
<td>COMPSTAT=1</td>
</tr>
<tr>
<td>Do Shout</td>
<td>To: CONTROL-M/Enterprise Manager</td>
</tr>
<tr>
<td></td>
<td>Text: “File trans.dat did not arrive on time”</td>
</tr>
</tbody>
</table>

The ctmfw utility processes On Statement/Code combinations in the following order:

1. On Statement/Code combinations related to sysout, for example:
   ON "*cp aaa bbb*" "*not found*"

2. On Statement/Code combinations based on the state [OK | NOTOK] of the job, for example:
   ON "*" "NOTOK"
Return Codes

The return codes listed in Table 13 are issued by the ctmfw utility after detecting if a file is created or deleted in the specified time frame.

Table 13  ctmfw – Return Codes

<table>
<thead>
<tr>
<th>Return Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>File successfully created or deleted (file arrived in the specified time frame and file size is above or equal to the minimum specified size).</td>
</tr>
<tr>
<td>1</td>
<td>- Utility failed. For example, because of a syntax error.</td>
</tr>
<tr>
<td></td>
<td>- A DO_NOTOK statement occurred, but no user-defined exit code was provided for the DO_NOTOK statement.</td>
</tr>
<tr>
<td>7</td>
<td>Indicates that the ctmfw request timed out. That is, the file was not detected in the specified time frame.</td>
</tr>
</tbody>
</table>

File Watcher Silent Mode Registry Key

The FileWatcher service does not open an additional window during execution. If you want visual feedback while running the service, the following registry key setting must be changed to N.

HKEY_LOCAL_MACHINE\SOFTWARE\BMC_Software\CONTROL-M\FileWatcher\SYSPRM\Silent_Mode

ctmpwd Utility

This utility adds, updates, and deletes CONTROL-M/Agent users and passwords. In addition, it changes security settings for the agent directories and cmd.exe. It also lists all users in the CONTROL-M/Agent password file. (This utility replaces the ctmcp utility in earlier versions.)

To run ctmpwd, you must be an administrator on the computer. In addition, Windows 2000 users running the utility must have the proper privileges defined in the Act as part of operating system parameter of the Local Security Settings application on the target machine.

NOTE

You must manually give Logon as a batch job rights to a new user. (See “How to Assign User Rights to Agent Users” on page 28.)
**Syntax**

```
CTMPWD -ACTION ADD|UPDATE|DELETE|LIST [-USER <user name>] [. -OLD_PASSWORD
<group name>]
```

**Examples**

**add a user and password**

```
ctmpwd -action add -user user1 -password 12345
```

**add the administrator user**

```
ctmpwd -action add -user admin -password abcde
```

**update a password**

```
ctmpwd -action update -user user1 -old_password 12345 -password 67890
```

or

```
ctmpwd -action update -user user1 -admin_password abcde -password 67890
```

**delete a user**

```
ctmpwd -action delete -user user1 -password 12345
```

or

```
ctmpwd -action delete -user user1 -admin_password abcde
```

**list all users**

```
ctmpwd -action list
```

**add a user to Agent Saturn**

```
ctmpwd -action add -user user3 -password 654321 -agent Saturn
```
In the following example, the ctmpwd utility enables the CONTROL-M/Agent administrator to modify passwords for users who have forgotten their password.

--- EXAMPLE ---
ctmpwd -admin_password

BMC Software recommends that the administrator first use the following command to establish a password for user ADMIN:

ctmpwd -action add -user ADMIN -password <user_admin_password>

In the following example, the user is added but the group’s SID is registered.

--- EXAMPLE ---
ctmpwd -action add -user user1 -password user1 -group Everyone
Agent Check utility

The CONTROL-M Agent Check Utility (ACU) is a tool that collects information and diagnostic data about the CONTROL-M Agent installation, execution state, and target environment. The data collected by the ACU is designed to assist CONTROL-M/Agent administrators and BMC technical support engineers to troubleshoot, fine-tune, and maintain the CONTROL-M/Agent.

With this tool, you can send generated reports to interested parties using e-mail or FTP to BMC Software (ftp://ftp.bmc.com/incoming). You can then print the report to a hierarchical XML file, or save the report as a text file.

This utility is located at <agent_directory>\EXE\ and can be run from either the command prompt or Windows Explorer.

To start the ACU application:

1. Open a command prompt window by typing cmd in Start > Run.

2. Enter the command `acu_gui` to run the Java application

   or

   `acu` to run the application from the command line.

   For information about running ACU from the command line, refer to “Command line usage” on page 72.

Using ACU

The ACU is divided into the following panels:

- Report tree
- Report output
- Report parameters selection
- Advanced Options panel
Report Parameter selection

The right-most panel of the ACU is used to select the data that you want to include in your report.

Table 15 Report Parameters

<table>
<thead>
<tr>
<th>Parameter Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Check Agent/Server Communication</td>
<td>Selecting this option runs the ag_ping utility. This utility verifies that CONTROL-M/Server is active on the Server computer connected to the Agent computer.</td>
</tr>
<tr>
<td>Check Network status/configuration</td>
<td>Selecting this option provides information about the network configuration and statistics using the netstat and ipconfig commands.</td>
</tr>
<tr>
<td>Collect Agent configuration information</td>
<td>Selecting this option provides information about the agent on which you ran the report. This runs the ctmagcfg and ctmwincfg utilities, checks the dll versions and configurations for the agent and CMs installed, and lists the files installed.</td>
</tr>
<tr>
<td>Collect disk/system resources</td>
<td>Selecting this option provides system information about the memory in use, free disk space, number of processes running, and so on.</td>
</tr>
<tr>
<td>Collect info related to orderid</td>
<td>Selecting this option collects information from files with names containing the specified orderid or information related to the specified orderid.</td>
</tr>
</tbody>
</table>
Once you select the areas for which you want to collect data and generate the report, a report tree appears on the left side of the screen. This tree lets you drill down into the various report parameters and select them for viewing in the Output panel.

### Output panel

The Output panel is where the data of the selected parameters is displayed. You can save, print, or e-mail the information for further analysis.

### Advanced Options

The Advanced options panel enables you to view additional information about the day’s activities, define parameters by which the PROCLOG files are saved, enter mail and FTP information for sending and uploading reports, and so on.

### Printing

You can print a generated or uploaded report or save it as a text file using the **File > Print** menu option.
To print the report, click **Print**. To save to a text file, click **Save** and enter a file name in the Save window.

**Command line usage**

To run ACU as a command line utility, enter the command `acu` with the relevant parameters. When ACU runs as a command line utility, a report of the ACU output is automatically saved to the `\<agent_directory\>\temp` directory.

**NOTE**

If you are not using the default agent, you must write the agent name as the first parameter in the command line.

**Syntax**

```
acu   [agent/<name>] [all] [silent] [system] [environment]
[configuration] [ping] [analyze] [jobinfo] [network]
[orderid/<orderid num>]
[ftplogs/<ftp_server> ftmdir/<ftmdir> filename/<filename>]
[mailreport/<from>/<to>/<id>/<pwd> mailsmtp/<smtp server>
[maillog]]
```
Table 16 lists the command line parameters and their descriptions.

Table 16  Command line parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>agent &lt;name&gt;</td>
<td>Used to specify an agent when more than one agent installation exists. When used, this parameter must be first.</td>
</tr>
<tr>
<td>all</td>
<td>Collects information for all options, including ping, environment, system, network, configuration, and analyze.</td>
</tr>
<tr>
<td>analyze</td>
<td>Analyzes the Agent logs and provides information about the possible symptom and its solution.</td>
</tr>
<tr>
<td>configuration</td>
<td>Information about the agent on which you ran the report.</td>
</tr>
<tr>
<td>environment</td>
<td>Collects system information and user specific information, such as root directories, domain, path, and so on.</td>
</tr>
<tr>
<td>filename</td>
<td>The name of the ZIP file you are uploading to the BMC Software ftp site.</td>
</tr>
<tr>
<td>ftpdir</td>
<td>Specify the directory into which the ZIP file is uploaded.</td>
</tr>
<tr>
<td>ftplogs</td>
<td>Zip the Agent PROCLOG directory and upload it to the BMC ftp server.</td>
</tr>
<tr>
<td>jobinfo</td>
<td>Provides information about the number of jobs processed since the last NewDay procedure, their status, job start time, job end time, and so on.</td>
</tr>
<tr>
<td>maillog</td>
<td>Zip the Agent PROCLOG directory and attach it to the e-mail.</td>
</tr>
<tr>
<td>mailreport</td>
<td>Output the report to a specific e-mail address.</td>
</tr>
<tr>
<td>mailssmtp</td>
<td>Specify the smtp server of the corresponding e-mail address.</td>
</tr>
<tr>
<td>network</td>
<td>Collects information about the network configuration and statistics.</td>
</tr>
<tr>
<td>orderid</td>
<td>Collects information from the files with names containing the specified orderid or information related to the specified orderid.</td>
</tr>
<tr>
<td>ping</td>
<td>Checks the connection between CONTROL-M/Agent and CONTROL-M/Server.</td>
</tr>
<tr>
<td>silent</td>
<td>Run the utility with no on-screen output.</td>
</tr>
<tr>
<td>system</td>
<td>Collects information about system resources.</td>
</tr>
</tbody>
</table>

Command line examples

- In the following example, ACU collects all the information about a specific agent and outputs it to your screen and to the /<agent_directory>/temp folder.

--- EXAMPLE ---

>acu all
In the following example, ACU checks the connection between the Agent and Server and collects information about the system, environment, and agent configurations.

**EXAMPLE**

```plaintext
>acu ping network configuration system environment
```

In the following example, ACU collects all the information about a specific agent and sends the information, including all the logs from the `\<agent_directory>\proclog` directory, to a specific e-mail address using the corresponding smtp server.

**EXAMPLE**

```plaintext
>acu all mailreport/user@domain.com/support@bmc.com mailsmtp/mail.domain.com maillog
```

In the following example, ACU collects all the information about a specific agent and uploads the information to the BMC ftp site.

**EXAMPLE**

```plaintext
>acu all ftplogs/ftp.bmc.com ftpdir/incoming filename/case_4684
```
Defining Microsoft Windows Jobs

You can define CONTROL-M jobs with the CONTROL-M/Desktop Job Editing form or with the CONTROL-M/Server ctmdefine and ctmcreate utilities.

The Job Editing form contains a series of panels. Each panel contains parameters whose value you can specify using this form. A job skeleton (template) determines the parameters that are included in the job.

When a job skeleton is designed for Microsoft Windows jobs, a special WIN panel is present in the Job Editing form. You can use this panel to define optional job object parameters that can be used for a Microsoft Windows job.

The following tasks are described in this chapter:

- “Creating a Job Skeleton for Microsoft Windows Jobs” on page 75.
- “Creating a Microsoft Windows Job” on page 78.
- “Setting Job Object Limits for a Microsoft Windows Job” on page 80
- “Viewing a Job Object” on page 83

Microsoft Windows Job Object Parameters are described on page 81.

**NOTE**
For more information about the Job Editing form and Job parameters, see the CONTROL-M/Desktop User Guide and the CONTROL-M Job Parameter and Variable Reference Guide.

Creating a Job Skeleton for Microsoft Windows Jobs

Use this procedure to prepare a skeleton (template) for Microsoft Windows jobs in CONTROL-M/Desktop.
Before You Begin

- Ensure that the windows.xml file was imported on computers where CONTROL-M/EM client components are installed. For instructions, see the section that deals with Importing WIN Panel Functionality in the CONTROL-M Installation Guide.
- Look for a skeleton that resembles the skeleton you want to define. If you find one, you can use it as a template.

Creating or Modifying a Skeleton

1. Open the Skeleton Editor using one of these methods:
   - Choose Tools => Skeleton.
   - Click Edit Skeleton on the toolbar.
   - Click Edit Skeletons in the Mass Create Form dialog box.

   A window similar to the following is displayed:

   ![Skeleton Editor Window]

2. Choose the required CONTROL-M from the drop-down list.

3. Click Application. An additional section of the Skeleton Editor is displayed.

4. In the Application Group field, you can specify either
   - the name of the CONTROL-M/Agent, or
   - the Node Group

   To specify an Agent, manually enter the name of the Agent.
To specify a Node Group, manually enter the name of the Node Group, or click Load to generate a list of Application Node Groups.

Select the required Node Group, and click OK. If the required Node Group is not displayed in this list, the ctmgetcm utility was not run properly. For information, refer to “Creating a CM Definition in CONTROL-M” on page 78.

5 In the application field:

- If you specified the Application Node Group field manually, you must specify an applicable set of values from the list.

- If you chose the Application Node Group field from the Load list, this field is automatically specified according to your selection.

**NOTE**
If CONTROL-M/Desktop is not connected to CONTROL-M/EM, enter the Application Type, Version, and CM Version information manually.

6 In the Form Name field, select WINDOWS, then click OK.

Where to Go from Here

<table>
<thead>
<tr>
<th>Subject</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Defining a Skeleton</td>
<td>For more information about defining a skeleton, see Chapter 5 of the CONTROL-M/Desktop User Guide.</td>
</tr>
<tr>
<td>Defining a Job</td>
<td>For information about defining a job, see “Creating a Microsoft Windows Job” on page 78. Also see Chapter 3 of the CONTROL-M/Desktop User Guide.</td>
</tr>
</tbody>
</table>

Defining the CM in CONTROL-M

Use this procedure to define the CM in CONTROL-M and install the Job Editing form using ctmgetcm.

Before you Begin

- Ensure that the windows.xml file was imported on computers where CONTROL-M/EM client components are installed. For instructions, see Importing WIN Panel Functionality in Chapter 13 of the CONTROL-M Installation Guide.

- Create a job skeleton. For more information, see “Creating a Job Skeleton for Microsoft Windows Jobs” on page 75.
Creating a CM Definition in CONTROL-M

In CONTROL-M/Server

1 Define a group name with application type WIN.

2 Specify the CONTROL-M/Agent as a node ID in the node group.

3 Define the <agent_name> in a node group of type WIN (WIN must be in capital letters).

4 Specify ctmgetcm to collect application server information from CONTROL-M/Agent using the following command

   ```
   ctmgetcm -nodeid <agent_name> -appltype WIN -action get
   ```

In CONTROL-M/EM

1 Install the CONTROL-M/Agent for Microsoft Windows form. For more information, see “Creating a Job Skeleton for Microsoft Windows Jobs” on page 75.

2 Modify the skeleton according to your requirements. Click Application in the Skeleton Editor. See page 75.

3 Click Load. The node groups available from CONTROL-M/Server are displayed. Select the required node group.

Where to Go from Here

<table>
<thead>
<tr>
<th>Subject</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Defining a Skeleton</td>
<td>For more information about defining a skeleton, see Chapter 5 of the CONTROL-M/Desktop User Guide.</td>
</tr>
<tr>
<td>Defining a Job</td>
<td>For information about defining a job, see “Creating a Microsoft Windows Job” on page 78. Also see Chapter 3 of the CONTROL-M/Desktop User Guide.</td>
</tr>
</tbody>
</table>

Creating a Microsoft Windows Job

Use this procedure to create a new CONTROL-M job processing definition for a Microsoft Windows job.
Creating a Microsoft Windows Job

Before you Begin

- Ensure that the `windows.xml` file was imported on computers where CONTROL-M/EM client components are installed. For instructions, see Importing WIN Panel Functionality in Chapter 13 of the CONTROL-M Installation Guide.

- Ensure that a job skeleton was defined for Microsoft Windows jobs. For more information, see “Creating a Job Skeleton for Microsoft Windows Jobs” on page 75.

- The job name of the Windows job you want to create must contain only characters (letters, digits, underscore) that can be used in a Microsoft Windows file name.

**NOTE**
When CONTROL-M/Agent handles a large number of jobs on a computer with Microsoft Windows 2000 Professional, the following message may be displayed "Application error 142".

Creating a Microsoft Windows Job

1. Select a skeleton for Microsoft Windows jobs from the **Current Skeleton** drop-down list in CONTROL-M/Desktop.

2. Choose one of the following:
   - **Edit => Job => New** from the menu bar
   - Press **Ctrl + J**
   - Click ![Image]

**NOTE**
For descriptions of all panels in the Job Editing form, see Chapter 3 of the CONTROL-M/Desktop User Guide.

3. Click the **WIN** tab of the Job Editing form.

The WIN panel is used to set parameter values for some Microsoft Windows jobs. This process is described in “Setting Job Object Limits for a Microsoft Windows Job” on page 80.

**NOTE**
For more information about the Job Editing form and Job Editing parameters, see the CONTROL-M/Enterprise Manager User Guide or the CONTROL-M/Desktop User Guide.
Setting Job Object Limits for a Microsoft Windows Job

Use this procedure to specify values for job object limitation parameters in the WIN panel of the Job Editing Form. If a value is not specified for a parameter, that parameter does not limit the job in any way.

Before you Begin

The WIN2K skeleton is used for defining job object limitations. If this skeleton does not exist, see “Creating a Job Skeleton for Microsoft Windows Jobs” on page 75.

To view the characteristics of the job object whose attributes are to be specified, see “Viewing a Job Object” on page 83.

NOTE
In messages, “job object” may be abbreviated as JO.

Setting Job Object Limits for a Microsoft Windows Job

1 Click the WIN tab of the Job Editing form. The WIN Panel is displayed.

Figure 8 WIN Panel

WIN panel parameters are described in Table 17 on page 82. All these parameters are optional.

2 Specify new data or modify existing data in the WIN Panel.
When you are satisfied with the data in the WIN panel, click **Save to Draft** to save the parameter specifications.

**Where to Go from Here**

The following table describes where you might find information about tasks that are related to this one.

<table>
<thead>
<tr>
<th>Subject</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Defining additional Microsoft Windows jobs</td>
<td>You can now define additional Microsoft Windows jobs by clicking the WIN tab of the Job Editing form.</td>
</tr>
<tr>
<td>Viewing jobs you have created or modified</td>
<td>Click <strong>Cancel</strong> to exit the WIN Panel and go to the Active environment to view the jobs you have created or modified.</td>
</tr>
<tr>
<td>Defining jobs</td>
<td>For information about defining jobs, see Chapter 3 of the CONTROL-M/Desktop User Guide.</td>
</tr>
</tbody>
</table>

**Microsoft Windows Job Object Parameters**

WIN panel parameters are described in Table 17. This table also contains the names of the corresponding AutoEdit variables that can be included on the command line or in a parameter input file when invoking the CONTROL-M/Server ctmcreate or ctmdefine utilities. For example,

```
/autoedit %WIN2K-PRIORITY_CLASS = "ABOVE_NORMAL_PRIORITY_CLASS"
```

**NOTE**

Values entered in WIN panel fields are validity checked. Values entered on the command line or in a parameter input file are not validity checked.

Except for Priority class and Scheduling class, all of these parameters can have decimal values (real numbers). Unless stated otherwise, maximum and minimum values are machine dependent.
<table>
<thead>
<tr>
<th>WIN Panel Parameter</th>
<th>Definition and AutoEdit Variable for CONTROL-M/Server</th>
</tr>
</thead>
<tbody>
<tr>
<td>Process execution time</td>
<td>Maximum CPU time, in seconds, for each process in a job. Minimum: 0.1. Maximum: 1.8 x 1012.</td>
</tr>
<tr>
<td>Job execution time</td>
<td>Maximum CPU time, in seconds, for entire job. Min: 0.1. Max: 1.8 x 1012.</td>
</tr>
<tr>
<td>Process memory</td>
<td>Maximum memory, in megabytes, allowed for each process in a job. Minimum: 0.1. Maximum: 4200.0.</td>
</tr>
<tr>
<td>Job memory</td>
<td>Maximum memory, in megabytes, allowed for job. Min: 0.1. Max: 4200.</td>
</tr>
<tr>
<td>Priority class</td>
<td>Highest priority class the job and its “children” can receive. Valid values:</td>
</tr>
<tr>
<td></td>
<td>■ IDLE_PRIORITY_CLASS</td>
</tr>
<tr>
<td></td>
<td>■ BELOW_NORMAL_PRIORITY_CLASS</td>
</tr>
<tr>
<td></td>
<td>■ NORMAL_PRIORITY_CLASS</td>
</tr>
<tr>
<td></td>
<td>■ ABOVE_NORMAL_PRIORITY_CLASS</td>
</tr>
<tr>
<td></td>
<td>■ HIGH_PRIORITY_CLASS</td>
</tr>
<tr>
<td></td>
<td>■ REALTIME_PRIORITY_CLASS</td>
</tr>
<tr>
<td>Scheduling class</td>
<td>Scheduling class for all processes of a job. Valid values: 0 – 9.</td>
</tr>
<tr>
<td></td>
<td>■ 0 - provides the minimum resources</td>
</tr>
<tr>
<td></td>
<td>■ 9 - provides the maximum resources</td>
</tr>
<tr>
<td>Minimum Working set size</td>
<td>Minimum RAM, in megabytes, for all processes of the job. Increasing the value of this parameter reduces page swapping for this process but reduces the RAM available for other processes. Min.: 0.1. Max.: 4200.0</td>
</tr>
<tr>
<td>Maximum Working set size</td>
<td>Maximum RAM, in megabytes, for all job processes. Decreasing this value reduces the likelihood that this job will interfere with other jobs but may increase the execution time for this job. Min.: 0.1. Max.: 4200.0</td>
</tr>
</tbody>
</table>
Viewing a Job Object

This Microsoft Windows procedure enables you to determine job object characteristics of any CONTROL-M job. You can use these characteristics to decide what job object limits should be specified.

Before you Begin

You can only view Job Object details for a job that is currently running. Use the Order or Force option to run the job you want to evaluate.

How to View a Job Object

1. Choose ... => Administrative Tools => Performance.
2. The Performance window (including its graph panel) is displayed. Click the large + button.
3. The Add counters dialog box is displayed.
   A. In the Performance object drop-down list, select JobObject.
   B. Choose All instances to display all existing job object instances.
      or
      Choose Select instances from list and select one or more of the displayed instances.
      
      The job instance format is <job_name> <order_number> <run_number>. These elements are separated by a blank.
   C. Choose Select counters from list. Then, select the characteristic in the displayed list that you want to analyze.

      To view objects on other Microsoft Windows computers, select counters from <name_of_computer> in the Add counters dialog box.

NOTE

You can determine the amount of memory and CPU time required for a job by viewing job object statistics in the job sysout. If a job exceeds job object limitations, the job will end NOTOK and the same error message will appear in the sysout and in the CONTROL-M/Server message log. WIN panel parameters are used in CONTROL-M/Agent by the SetInformationJobObject API. For more information, see Microsoft documentation for the SetInformationJobObject API.
**Viewing a Job Object**

D  Click **Add**.

4  Data for the selected “counter” is displayed in the **Performance** graph. Analyze this data to determine whether to specify a related job object limit and, if so, the limiting value to specify.

**Where to Go from Here**

The following table describes where to find information about tasks that are related to this one.

<table>
<thead>
<tr>
<th>Subject</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Viewing a Job Object</td>
<td>If you need to view other characteristics for the same job object or view the characteristics of other job objects, repeat Steps 3 and 4 of this procedure.</td>
</tr>
<tr>
<td>Setting Job Object limits</td>
<td>Use the procedure on page 80 to specify values for the parameters in the <strong>WIN</strong> tab of the Job Editing form.</td>
</tr>
<tr>
<td>Defining additional Microsoft Windows jobs</td>
<td>You can create additional Microsoft Windows jobs by clicking the <strong>WIN</strong> tab of the Job Editing form. For information about defining jobs, see Chapter 3 of the <strong>CONTROL-M/Desktop User Guide</strong>.</td>
</tr>
<tr>
<td>Viewing jobs you have created or modified</td>
<td>Click <strong>Cancel</strong> in the <strong>WIN</strong> tab the Job Editing form to go to the Active environment to view the jobs you have created or modified.</td>
</tr>
</tbody>
</table>
Configuration Parameters

Configuration parameters can be modified using the utilities described in this chapter, or using the Agent Configuration utility.

CONTROL-M/Agent Configuration

The CONTROL-M/Agent configuration parameters in Table 18 can be modified by using the ctmagcfg utility. For information about this utility, see “Agent Configuration Utility” on page 47.

Table 18 CONTROL-M/Agent Configuration Parameters (Part 1 of 3)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agent-to-Server Port Number</td>
<td>CONTROL-M/Server and CONTROL-M/Agent communicate by means of two TCP/IP ports. This parameter specifies the port in the Server computer that receives data from the Agent computer.</td>
</tr>
<tr>
<td></td>
<td>- The value specified must match the value assigned to the Agent-to-Server Port Number parameter on the Server computer.</td>
</tr>
<tr>
<td></td>
<td>- Verify that the specified port number is not used for any other purpose.</td>
</tr>
<tr>
<td></td>
<td>- Specify a numeric value from 1025 to 65535, inclusive. Default: 7005</td>
</tr>
<tr>
<td>Authorized CONTROL-M/Server Hosts</td>
<td>Names of all CONTROL-M/Server hosts authorized to send requests to this Agent. The primary CONTROL-M/Server host must be included.</td>
</tr>
<tr>
<td></td>
<td>- Use the “</td>
</tr>
<tr>
<td></td>
<td>- Do not include spaces between host names.</td>
</tr>
<tr>
<td></td>
<td>- Default: Name of the primary CONTROL-M/Server host.</td>
</tr>
<tr>
<td><strong>Note:</strong></td>
<td>Specify names, not IP addresses.</td>
</tr>
</tbody>
</table>
## Table 18  CONTROL-M/Agent Configuration Parameters (Part 2 of 3)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
</table>
| AutoEdit Inline           | Flag that indicates whether AutoEdit variables defined in a CONTROL-M job are set as Environment variables in the user job environment. Valid values are:  

Y = AutoEdit variables are set.  
N = AutoEdit variables are not set. Default.  
This parameter can only be changed after completing the installation.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Comm Trace                | Flag that indicates whether CONTROL-M/Agent – CONTROL-M/Server communication packets are written to a file. Valid values: 1 (on), 0 (off). Default: 0. If set to 1, log files are created for analysis by support staff.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Common Event Mechanism    | Flag for specifying if all control modules, not just the default control module, should be able send messages to the Tracker process without waiting for the tracker polling interval. Messages are sent using the port specified in the Tracker Port parameter to inform the Tracker that a job ended. Valid values are:  

Y = Use the Common Event Mechanism. Default.  
N = Do not use the Common Event mechanism. Only the default control module can send messages directly to the Tracker process.  
**Note:** When CONTROL-M/Agent is upgraded from an earlier version, the default is N for backward compatibility.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| CTMS Address Mode         | This flag enables you to handle situations in which the Agent can contact the Server by IP address but not by name. Valid values: null and IP. If set to IP, a “track all” request from an authorized Server causes the value of the Primary CONTROL-M/Server host configuration parameter to be set to the IP address of the Server that sent the request.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Daily Log File Enabled    | Valid values: Y, N. Default: Y  
If set to Y, a daily Log file with the name daily_PROCLOG_<YYYYMMDD>.log is created in directory <CONTROL-M/Agent home>\DATA. Job begin, job end, New Day procedure, and sysout copy messages are written to this log file.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Days to Retain Log Files  | Number of days to retain programmer debug, communication trace, and Daily log files in the proclog directory. Default: 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Diagnostic Level          | Flag that indicates whether to generate diagnostic messages. Valid values: 0–4 Level 0 generates no diagnostics. Level 4 generates maximum diagnostics. This parameter is for systems support use and can only be changed after completing the installation.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Primary CONTROL-M/Server Host | Host computer for the CONTROL-M/Server that receives and executes requests from this Agent. Default: Computer on which the installation was made.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Protocol version          | Server-Agent communication protocol version. Default: 06                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
### Table 18  CONTROL-M/Agent Configuration Parameters (Part 3 of 3)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listen to Net Card</td>
<td>The network name or IP address for CONTROL-M/Agent for Microsoft Windows 2000 support of multiple IP interfaces (network cards) for a single computer. Valid values are:</td>
</tr>
<tr>
<td></td>
<td>■ The network name or IP address of a specific card.</td>
</tr>
<tr>
<td></td>
<td>■ The reserved value *ANY for all network cards.</td>
</tr>
<tr>
<td></td>
<td>This helps ensure that CONTROL-M/Agent will receive requests regardless of which IP interface is used to send those requests.</td>
</tr>
<tr>
<td>Server-to-Agent Port Number</td>
<td>CONTROL-M/Server and CONTROL-M/Agent communicate by means of two TCP/IP ports. This parameter specifies the port in the Server computer that sends data to the Agent computer.</td>
</tr>
<tr>
<td></td>
<td>■ The value specified must match the value assigned to the Server-to-Agent Port Number parameter on the Server computer.</td>
</tr>
<tr>
<td></td>
<td>■ Verify that the specified port number is not used for any other purpose.</td>
</tr>
<tr>
<td></td>
<td>■ Specify a numeric value from \textbf{1025} to \textbf{65535}, inclusive. Default: \textbf{7006}</td>
</tr>
<tr>
<td>SSL</td>
<td>SSL support for CONTROL-M/Agent for Microsoft Windows. When SSL support is implemented in CONTROL-M/Server it makes a one-time request to set this parameter automatically for each associated Agent. This request requires 2 to 5 minutes for each Agent. Setting this parameter manually can save time if a large number of Agents work with CONTROL-M/Server. For more information about setting this parameter manually, see “Agent Configuration Utility” on page 47.</td>
</tr>
<tr>
<td>TCP/IP Timeout</td>
<td>Communication timeout in seconds. Specify a numeric value greater than or equal to zero. Default: 60</td>
</tr>
<tr>
<td>Timeout for Agent utilities</td>
<td>Maximum time (in seconds) the Agent waits after sending a request to CONTROL-M/Server. Default: 600</td>
</tr>
<tr>
<td>Tracker Polling Interval</td>
<td>Time in seconds that the Tracker waits for a message from a running job before it examines the status of all jobs for which no message was received. This parameter can only be changed after completing the installation. Default: 60</td>
</tr>
<tr>
<td>Tracker Port</td>
<td>Number of the port for sending messages to the Tracker process when jobs end. This parameter is used in conjunction with the Common Event Mechanism parameter.</td>
</tr>
<tr>
<td>Tracker Report to Server</td>
<td>Report the status of the job to CONTROL-M/Server. Use this parameter when CONTROL-M/Server is working behind a firewall. Valid values are:</td>
</tr>
<tr>
<td></td>
<td>■ \textbf{Y} – Report the job status. If the Agent is not able to send this report, the job remains in executing status.</td>
</tr>
<tr>
<td></td>
<td>■ \textbf{N} – Do not report the job status. The job status changes to FINISHED when the job has completed execution.</td>
</tr>
</tbody>
</table>
The Control Module configuration parameters in Table 19 can be modified by using the `ctmwincfg` utility. For information about this utility, see “Agent Configuration Utility” on page 47.

### Table 19  Control Module Configuration Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Add Job Object Statistics to Sysout</strong></td>
<td>Flag that indicates how to handle job object processing statistics.</td>
</tr>
<tr>
<td><strong>Selected</strong></td>
<td>Statistics are added to the end of the sysout file. Default.</td>
</tr>
<tr>
<td><strong>Not selected</strong></td>
<td>Statistics are not added to the sysout file.</td>
</tr>
<tr>
<td><strong>CD to user 'Home Dir'</strong></td>
<td>Indication if CONTROL-M/Agent should change the directory to the user home directory as defined in the user profile before the user job runs. Valid values:</td>
</tr>
<tr>
<td><strong>Y</strong></td>
<td>The directory is changed.</td>
</tr>
<tr>
<td><strong>N</strong></td>
<td>The directory is not changed.</td>
</tr>
<tr>
<td><strong>Default Printer</strong></td>
<td>Default printer for job sysout files. Type a printer name in the field box or select a name from the list box. Default: Blank</td>
</tr>
<tr>
<td><strong>Domain Controller</strong></td>
<td>Name of server managing access to resources and the database. Specify the name of the server in the field box. Default: Blank</td>
</tr>
<tr>
<td><strong>E-mail User Password</strong></td>
<td>Password for the e-mail user account. This parameter can only be changed after completing the installation.</td>
</tr>
<tr>
<td><strong>E-mail User Account Profile (MAPI profile)</strong></td>
<td>User e-mail account which the Agent uses to send e-mail. See the appropriate CONTROL-M/Server Administrator Guide for information about the Shout utility. This parameter can only be changed after completing the installation.</td>
</tr>
<tr>
<td><strong>Job children inside job object</strong></td>
<td>Flag that specifies if procedures invoked by a job can be run outside the Job Object. If so, this prevents a situation in which the original job remains in executing mode until the invoked procedure completes.</td>
</tr>
<tr>
<td><strong>N</strong></td>
<td>All procedures invoked by the job are run outside the job object.</td>
</tr>
<tr>
<td><strong>Y</strong></td>
<td>All procedures invoked by the job are run inside the job object. Default.</td>
</tr>
<tr>
<td><strong>Logon As User</strong></td>
<td>Flag that specifies which user account is used for the services to log on to.</td>
</tr>
<tr>
<td><strong>Selected</strong></td>
<td>Jobs are submitted with the permissions and environment variables of the specified user.</td>
</tr>
<tr>
<td><strong>Not selected</strong></td>
<td>Jobs are submitted with the permissions and environment variables of the local system account. Default.</td>
</tr>
</tbody>
</table>

See “Determining the Owner of Jobs Run on the Agent” on page 27.
### Logon Domain

The domain is determined by the value of this parameter if `<domain>` is not specified in `<domain>\<username>` in the `owner` parameter of the job definition. If the domain is not specified in the owner parameter or this parameter, the user profile is searched in the trusted domains.

**Note:** BMC Software recommends that you do *not* specify a value for Logon Domain.

### Run user ‘Logon Script’

Indication if a user-defined logon script should be run by the CONTROL-M/Agent before running the standard user logon script. Valid values:

- **Y** – The user-defined logon script is run, if it exists.
- **N** – The user-defined logon script is not run.

### Sysout Name

Flag that determines the prefix for the Sysout file name. Valid values:

- **MEMNAME** – The Sysout file prefix is the MEMNAME of the job.
- **JOBNAME** – The Sysout file prefix is the JOBNAME of the job.

This parameter can only be changed after completing the installation.

### Wrap parameters with double quotes

Indication of how parameter values (%%PARMn,...,%%PARMx) are handled in by CONTROL-M/Agent for Microsoft Windows. Valid values are:

1 – If a parameter value contains a blank, it is passed to the operating system enclosed in double quotes. If no blank is in the parameter value, no quotes are included.

2 – Parameter values are always passed to the operating system without quotes. If quotes were specified in the job definition, they are removed before the parameter is passed onward by the agent. This option is compatible with the way that these parameters were handled in version 6.0.0x, or 6.1.01 with Fix Pack 1, 2, 3, or 4 installed. In this case, if a parameter value contains a blank, the operating system may consider each string as a separate parameter.

3 – All parameters are passed to the operating system enclosed in double-quotes. This causes the operating system to treat all parameter values as strings (not numbers). This option is compatible with the way that parameters were handled by version 6.1.01 with no Fix Pack installed.

4 – Parameters are passed to the operating system in exactly the same way that they were specified in the job definition. No quotes are added or removed in this case. This option is compatible with the way that parameters were handled by version 2.24.0x.
CONTROL-M Agent Services Configuration

These parameters affect the operation of the following CONTROL-M/Agent services:

- Agent service
- Tracker service
- FileWatcher service

Table 20 System Configuration for CONTROL-M/Agent Services

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log on as</td>
<td>User account under which CONTROL-M Agent and CONTROL-M Tracker services will run.</td>
</tr>
<tr>
<td></td>
<td>Valid values: <strong>Local System Account</strong>, <strong>This Account</strong>.</td>
</tr>
<tr>
<td></td>
<td>- <strong>Local System Account</strong> – Service will log on as the system account. Default.</td>
</tr>
<tr>
<td></td>
<td>Subparameter:</td>
</tr>
<tr>
<td></td>
<td><strong>Allow Service to Interact with Desktop</strong> – This option can be selected only if the service</td>
</tr>
<tr>
<td></td>
<td>is running as a local system account. See “Maintaining CONTROL-M/Agent Services” on page 24.</td>
</tr>
<tr>
<td></td>
<td>- <strong>Selected</strong> – the service provides a user interface on a desktop that can be used by</td>
</tr>
<tr>
<td></td>
<td>whoever is logged in when the service is started. Default.</td>
</tr>
<tr>
<td></td>
<td>- <strong>Unselected</strong> – The service does not provide a user interface.</td>
</tr>
<tr>
<td></td>
<td>- <strong>This Account</strong> – User account under which CONTROL-M Agent and CONTROL-M Tracker services</td>
</tr>
<tr>
<td></td>
<td>will run. See “Logon As User” on page 88.</td>
</tr>
<tr>
<td>Note:</td>
<td>If the owner of any CONTROL-M jobs has a “roaming profile” or if job output (sysout) will be</td>
</tr>
<tr>
<td></td>
<td>copied to or from other computers, the Logon mode must be set to <strong>This Account</strong>.</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Startup Type</td>
<td>How to install CONTROL-M/Agent and CONTROL-M Tracker services. Valid values: <strong>Automatic</strong>,</td>
</tr>
<tr>
<td></td>
<td>Manual, Disabled. Recommended value: <strong>Automatic</strong>.</td>
</tr>
<tr>
<td></td>
<td>- <strong>Automatic</strong> – Services should start when the system starts. Default.</td>
</tr>
<tr>
<td></td>
<td>- <strong>Manual</strong> – User or a dependent service can start services.</td>
</tr>
<tr>
<td></td>
<td>- <strong>Disabled</strong> – User or a dependent service cannot start services.</td>
</tr>
</tbody>
</table>
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