

BMC Control-M Agentless

Tips and Tricks

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BMC CONTROL-M – AN IT WORKLOAD AUTOMATION PLATFORM

Job Scheduling has evolved to a point where it is a critical part of the business process, not just a segment of IT. Process and workload automation are well integrated in most business practices and are essential for the success of every modern organization around the globe. BMC Control-M is a leading workload automation broker and an enterprise scheduling solution, allowing customers to automate and integrate online and batch processes that support the bottom line across multiple platforms and applications.

From a single point of management, BMC Control-M provides workload automation and scheduling control over multiple platforms and applications across the enterprise. This solution maximizes automation by providing cross-application and cross-platform scheduling capabilities, such as job dependencies, workload balancing, management by exception, and status-based job execution.

BMC Control-M prevents scheduling problems from developing into business problems. The solution's proven success record maximizes data center hardware and software investments over multiple platforms, merging new and traditional technologies to effectively manage heterogeneous environments.

BMC Control-M:

- » Automates the details of production management
- » Minimizes manual intervention in the production process
- » Reduces manual errors and costs, streamlining the production flow
- » Simplifies production management through user-friendly capabilities

USING STANDARD AGENT-BASED SCHEDULING

Conventional enterprise scheduler architecture is based on centralized servers managing job definitions and executions, with agents installed throughout the enterprise on every host upon which jobs are executed. These agents are responsible for the actual job submission in the target operating system, as well as their tracking and the analysis of each job's completion results.

Such an architecture allows the reliable running of high-volume workloads. The agent components are run with administrator (root) authorization levels and therefore the overhead of the security management is minimal. On the other hand, such an architecture can increase the enterprise scheduler total cost of ownership, due to the necessity to install the agent components on a high number of hosts, apply ongoing software updates, and administer the software configuration. In addition, having the agent run as administrator on the remote host might be considered a security issue by some sites.

AGENTLESS SCHEDULING

Agentless solution is a revolutionary technology that can dramatically reduce the total cost of ownership of a workload automation solution by significantly decreasing its footprint throughout the IT landscape. It allows users to manage jobs on remote hosts while maintaining zero footprint on the managed servers. The agentless solution is based on standard and secured communication technologies (SSH and WMI) and is a highly scalable solution.

The agentless solution can be mixed with conventional agents. The question of whether a job submission to a host is performed by using conventional agents or the agentless solution is entirely transparent to the end user.

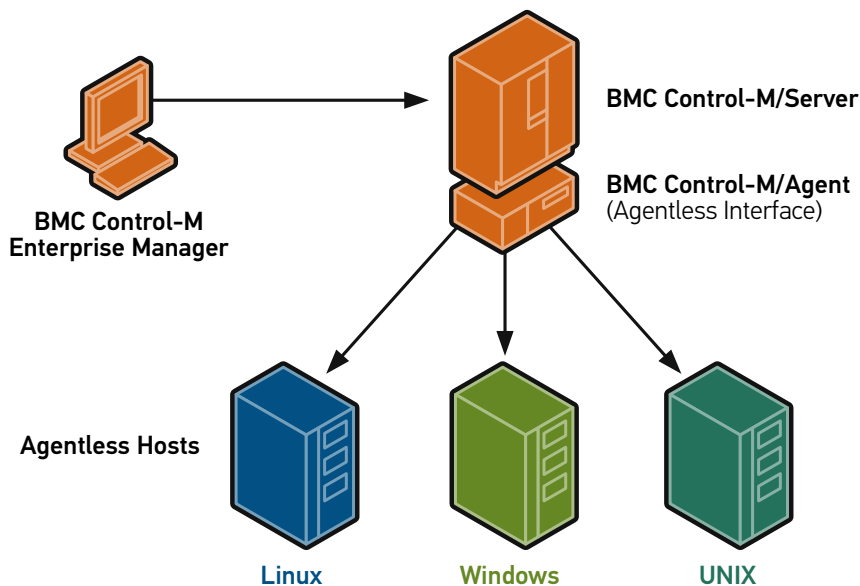
BMC Control-M agentless technology provides first-day support for new platforms and operating systems releases. It requires no migration or changes to existing job definitions.

AGENTLESS ARCHITECTURE

To the person defining the scheduling definition or monitoring the scheduling production activity, it is entirely transparent if there is a BMC Control-M/Agent installed or if the jobs are submitted using agentless scheduling. This configuration is controlled by the Control-M administrator, using the Control-M Configuration Manager.

When installing BMC Control-M/Server version 6.3.01 or higher, a BMC Control-M/Agent is automatically installed as well. This agent is referred to as <local> and can be used to submit jobs to remote hosts in agentless mode.

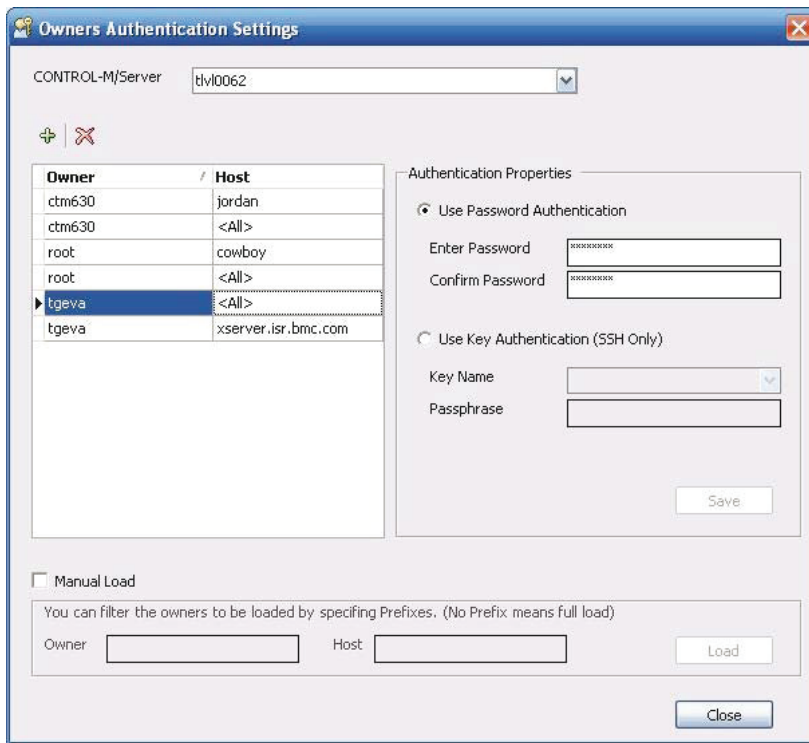
BMC Control-M agentless scheduling is scalable and designed for high-availability configurations. Multiple BMC Control-M/Agents can be used to submit and manage jobs on remote hosts. This ability allows users to balance the workload of the agentless jobs' management between multiple hosts running BMC Control-M/Agents, while avoiding a single point of failure. Agentless technology is based on market standard technologies, providing secure and reliable communication.



SSH (Secure Shell) is a package available out of the box with all tier-1 UNIX® platforms (HP, AIX®, Solaris™, Linux®) and additional platforms, such as iSeries and OpenVMS. It is also available for Microsoft Windows and most tier-2 platforms as complementary packages (OpenServer, UnixWare, IRIX, NCR). When using SSH, you can use either a user/password authentication or SSH private/public keys.

WMI (Windows Management Instrumentation) is a Microsoft Windows-based API available out of the box on all Microsoft Windows platforms. When using BMC Control-M agentless technology, the BMC Control-M/Agent that submits and manages the job connects to the remote host that runs the job using the credentials of the job owner, which is a user defined on the remote host operating system.

The job owner's credentials (either user/passwords or SSH keys) are stored encrypted in the BMC Control-M/Server database. These credentials can be managed by using the BMC Control-M Configuration Manager graphical interface or a command line utility.



ADDING A NEW REMOTE HOST

A new remote host can be added in one of the following ways:

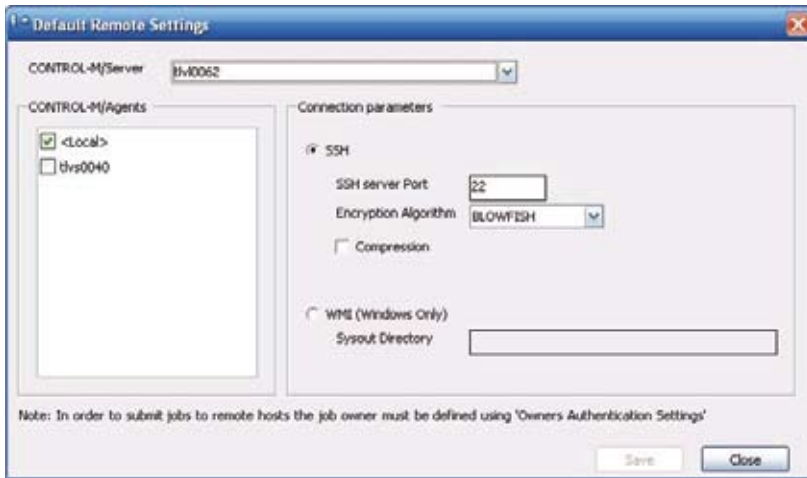
AUTOMATIC DEFINITION

When submitting a job to a new remote host, BMC Control-M/Server first checks if there is a BMC Control-M/Agent running on this host. If not, it tries to connect to the remote host using the default remote settings. These settings define the communication protocol to be used (SSH or WMI), communication port, and the BMC Control-M/Agents that will be used for submitting and managing the jobs on this remote host.

Manual definition (Advanced mode)

New remote hosts can also be added manually to the BMC Control-M topology, without first running jobs on them. This can be done interactively using the new remote host wizard in the BMC Control-M Configuration Manager or using a command line utility in batch mode.

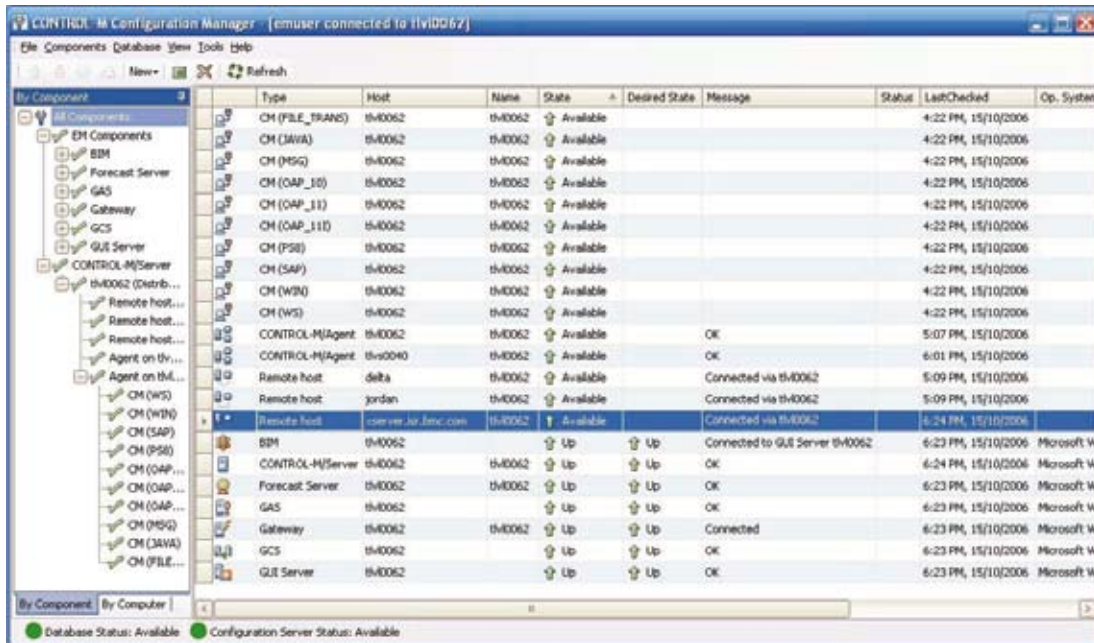
Using the same interfaces, existing BMC Control-M/Agents can also be converted to remote hosts.



MONITORING REMOTE HOSTS IN THE BMC CONTROL-M CONFIGURATION MANAGER

Remote host components are displayed in BMC Control-M Configuration Manager at the same hierarchy level as BMC Control-M/Agent.

The availability status of each remote host is displayed, along with the operating system details and the list of BMC Control-M/Agents that can manage jobs on it.



BEST PRACTICES Q&A: VERSIONS, PLATFORMS, AND CONFIGURATIONS

- 1. Q. I am in the process of migrating BMC Control-M to a newer release. What BMC Control-M component releases should I have so I can utilize agentless scheduling?**

A. BMC Control-M/Enterprise Manager Version 6.3.01 with FP1 or higher
BMC Control-M/Server and BMC Control-M/Agent Version 6.3.01 or higher
- 2. Q. Which BMC Control-M/Agents can communicate with remote hosts? For example, can I use BMC Control-M/Agent for iSeries or Tandem?**

A. The BMC Control-M/Agents that can be used to manage jobs on remote hosts are BMC Control-M/Agent for UNIX, Linux, and Microsoft Windows, version 6.3.01 or higher

When using WMI, the BMC Control-M/Agent that is used to connect to the remote host must be installed on a Microsoft Windows platform
- 3. Q. Will the use of agentless scheduling affect my BMC Control-M license?**

A. No. Agentless scheduling is licensed in exactly the same way as traditional agent-based scheduling: per tasks or per managed servers
- 4. Q. On what platforms can I run jobs in agentless mode?**

A. When using SSH, jobs can run in agentless mode on:

 - All UNIX flavors
 - All Microsoft Windows platforms
 - Linux
 - z/OS USS (Agent 6.3 FP1 or higher)
 - OpenVMS (Agent 6.3 FP3 or higher)
 - iSeries (AS/400) PASE environment (Agent 6.4.01 or higher)

When using WMI, jobs can run in agentless mode on:

 - Windows Server 2003
 - Windows XP (Agent 6.3 FP1 or higher)
 - Windows Vista (Agent 6.3 FP1 or higher)
 - Windows 7 (Agent 6.4 FP2 or higher)
 - Windows Server 2008 (Agent 6.3 FP3 or higher)
 - Windows Server 2008 R2 (Agent 6.4 FP2 or higher)
- 5. Q. What versions of SSH communication protocol are supported and how can I verify that the version that is used by my SSH server is supported?**

A. SSH communication protocol 2 is supported.

 - Run 'ctmping -nodeid <remote host name>'.
 - If your SSH server does not support protocol version2, you will find a descriptive message in BMC Control-M/Agent log.
- 6. Q. How can I convert conventional BMC Control-M/Agent definitions to remote hosts?**

A. Shut down the BMC Control-M/Agent(s).

 - If only a few BMC Control-M/Agents are being converted, use the BMC Control-M Configuration Manager. Right click on each BMC Control-M/Agent entry and select the "Convert to Remote Host" option.
 - If a large number of BMC Control-M/Agents need to be converted, use 'ctmhostmap'. Before the conversion, define all jobs owners using the BMC Control-M Configuration Manager (interactive) or using the 'ctmsetown' utility (batch).
- 7. Q. Where should I install the BMC Control-M/Agent that will be used to access remote hosts?**

A. During the installation of BMC Control-M/Server 6.3.01 (or higher), BMC Control-M/Agent is installed on the same host and identified as <local> in various dialogs and is used by default. Additional BMC Control-M/Agents can be installed on other machines to balance the workload or as desired.

8. Q. I would like to run jobs in agentless mode on UNIX and Windows clusters. Are there any considerations for using “virtual” names for remote hosts.

- A. The use of virtual hostnames for communicating with remote hosts is supported both with SSH and WMI remote hosts.

When the virtual hostname represent more than a single physical server (for example, when communicating with a cluster), use the “Authorize SSH Known Hosts...” option in BMC Control-M configuration manager to add SSH signatures for each of the physical hosts.

No configuration changes are required when using WMI.

9. Q. Can I install BMC Control Modules on remote hosts?

- A. Control Modules are installed on conventional BMC Control-M/Agents. Note however, that the number of instances required for most Control Modules is very small. For example, a single installation of the Control Module for SAP can schedule and manage all SAP jobs on multiple SAP instances within an organization.

LOAD BALANCING AGENTLESS JOBS

The amount of concurrent agentless jobs that can be managed on a remote host is dependent upon the resources available from the operating system, such as number of concurrent processes and threads, file descriptors, available memory, and disk space.

SSH

- » SSH servers allow unlimited number of concurrent sessions. By default, some SSH servers are configured to limit the amount of concurrent logins, but this limitation can be configured. Note that this limitation does not refer to the amount of concurrent sessions, but rather to the login procedure and the credentials authentication process.
- » Starting with BMC Control-M/Agent 6.4, two network sessions (SSH & SFTP) are initiated for each job submitted to a remote host.
 - On UNIX and Linux operating systems, the SSH session is terminated shortly after the job is submitted and the SFTP session is kept for monitoring the submitted job.
 - On Windows, both sessions are kept open during the entire job execution.
- » Each network session can generate one or more system processes. This differs from one operating system flavor to another.
- » In some operating systems, the maximum number of processes that can be initiated by the same user should be adjusted to the amount of current agentless jobs running by the same job owner.

WMI

WMI allows the running of around 100 concurrent jobs in agentless mode. This volume depends purely on the operating system and hardware capacity. Each job submitted to a remote host using the WMI interface is represented by a single process on the remote host. This limitation only applies to concurrent runs – there is no technical limitation on the overall number of jobs

AGENTLESS JOBS MANAGEMENT IN BMC CONTROL-M/AGENT

Each BMC Control-M/Agent can submit and manage several thousands of concurrent jobs on a single or multiple remote hosts. There is no “daily” limitation beyond the capacity of the operating system and hardware. Calculating the number of jobs that a single BMC Control-M/Agent can manage on remote hosts can be done by estimating the amount of conventional “local” jobs that the agent machine can run. Each “local” job is represented by a single process or thread on the BMC Control-M/Agent machine. Each job submitted to a remote host is also represented by a single process or thread on the BMC Control-M/Agent machine.

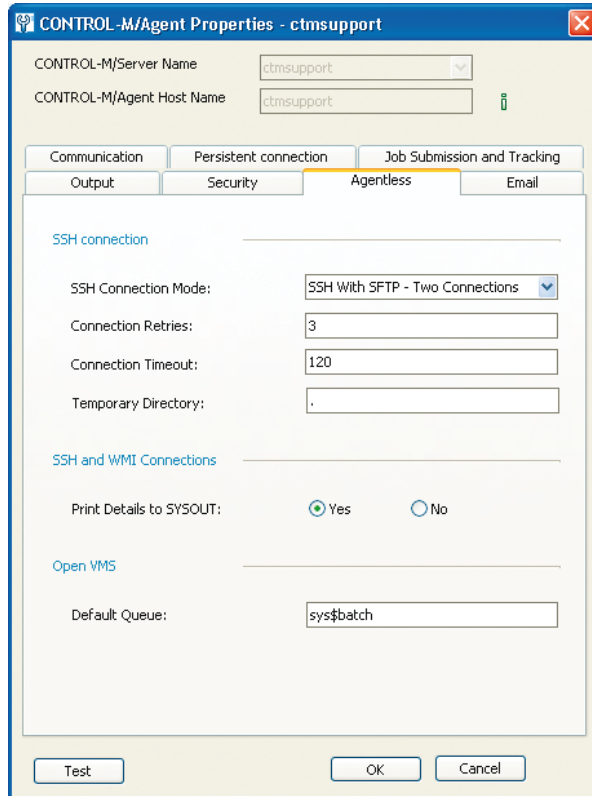
Therefore, if a certain machine can manage 2,000 concurrent “local” jobs, it can also submit and manage 2,000 agentless jobs to remote hosts or 1,000 “local” jobs and 1,000 agentless jobs.

NODE GROUP SUPPORT

Node Groups include definitions of logical node names, which represent either BMC Control-M/Agents or remote hosts connected using agentless technology. When submitting jobs to a node group, the jobs are balanced between all the nodes in the group, regardless of whether these are conventional agents or remote hosts.

Handling network disconnections

The ability to handle network disconnections between BMC Control-M/Agent and a remote host is available starting with fix-pack 1 of BMC Control-M/Agent 6.3.01. This ability includes several configuration parameters controlling the number of connection retries and timeouts. Starting with version 6.4.01, these parameters can also be configured via the BMC Control-M Configuration Manager.



BEST PRACTICES Q&A: MANAGEMENT

- Q. How can I find out which remote hosts can be accessed by each BMC Control-M/Agent and which BMC Control-M/Agent can access which remote hosts?**
 - In BMC Control-M Configuration Manager, use the “Show Remote Hosts” option from the BMC Control-M/Agent context menu and “Show Agents” in the remote host context menu.
- Q. Some of the servers where I need to schedule jobs are located in areas with unstable networks. Can BMC Control-M handle network disconnections for agentless jobs?**
 - Network disconnections can be recovered, regardless of whether they occur between BMC Control-M/Server and BMC Control-M/Agent (any version) or between BMC Control-M/Agent and a remote host (Agent 6.3.01 FP1 and higher), and regardless of whether the jobs are still running or if they have ended.

Recovery from network disconnections is supported when you use remote hosts on UNIX, Linux, and OpenVMS (by using SSH) and when you use remote hosts on Windows (by using WMI).

- 3. Q. How can I check the connection status of a remote host?**
- A. The status of all remote hosts (along with all other BMC Control-M components) is displayed in the BMC Control-M Configuration Manager. The status is periodically updated. To initiate a manual update, right click on a remote host entry and select Ping.
- 4. Q. Can agentless jobs include shout post-processing actions?**
- A. Yes. Shouts to MAIL are performed by the BMC Control-M/Agent that is used to manage the jobs on the remote host. Other types of shouts are performed by BMC Control-M/Server (as with jobs running on conventional BMC Control-M/Agents).
- 5. Q. Can I submit jobs from different BMC Control-M/Servers to the same remote host?**
- A. Yes. Each BMC Control-M/Server connects to the remote host individually using a unique connection. You can use the same job owner for multiple jobs running simultaneously, managed by different BMC Control-M/Servers.
- 6. Q. Can jobs running on remote hosts in agentless mode access network resources from the node they run on?**
- A. When the remote host is configured for SSH communication mode, jobs can access any network resource.
- For example, when running a script located on central repository server, having a batch program accessing a shared folder or printing the job's output to a network printer.
- When the remote host is configured for WMI communication mode, such network resources can be accessed when the job owner is a domain user and the DELEGATE impersonation level is granted to the user and to any computer included in the chain of calls.
- This authorization is granted on the domain controller server using the "Active directory Users and Computers" interface.
- 7. Q. Where are Sysout handling post processing actions, such as copy or move Sysout, performed?**
- A. By default, Sysout handling post processing actions are performed on the BMC Control-M/Agent that submit and track the jobs.
- You can set the RJX_COPY_SYSOUT_REMOTE parameter value to Y in BMC Control-M/Agent OS.dat file to enable the Sysout handling on the agentless remote host instead.
 - This ability requires BMC Control-M/Agent 6.4.01.100 (fix-pack 1)
- 8. Q. The jobs I run on a certain remote host generate a very large Sysout. Can I disable the Sysout copy from the remote host to BMC Control-M/Agent?**
- A. You can configure BMC Control-M/Agent not to copy Sysout files from agentless remote hosts to the agent computer when those jobs complete by setting the "Download Sysout from Remote Host when job ends" parameter value to N in the BMC Control-M Configuration Manager.
- When this mode is configured, the view Sysout action is not available for the agentless jobs managed by this BMC Control-M/Agent and ON statement defined in the jobs are ignored.
 - This ability requires BMC Control-M/Agent 6.4.01.300 (fix-pack 3)

BEST PRACTICES Q&A: SECURITY

- 1. Q. I am planning to run jobs on a Windows-based server in agentless mode using WMI interface. What are the security-related aspects I should be aware of?**
- A. The BMC Control-M job owner must be a member in the Windows "Administrators" authorization group. In addition, in order to perform post-processing actions (analyze the job's Sysout), and view/edit the jobs script, you must have the Sysouts folder shared and available for BMC Control-M/Agent user.
- 2. Q. The servers that I plan to run jobs on are located behind a firewall. Can I schedule the jobs using agentless technology?**
- A. When using SSH, you should open the SSH server port (default is 22) in the firewall. SFTP port is the same (6.3.01 FP1).

When using WMI, open the WMI RPC port (default is 135) and the Microsoft Directory Services port (default is 445)

for the Sysouts shared folder.

Alternatively, you can install BMC Control-M/Agent behind the firewall to be used as the agentless interface and use persistent connection mode for the communication between BMC Control-M/Server and BMC Control-M/Agent.

3. Q. My organization uses Active Directory and NIS to maintain identical credentials for each user on all servers. Do I still need to create separate settings for each user/host in Owners Authentication Settings?

A. No. Use the <All> selection for the hostname field in the "Owners Authentication settings" dialog.

4. Q. Assuming I need to change the job's owner's passwords every 'x' days, how can I automate this procedure?

A. All agentless authentication management can be done via BMC Control-M Configuration Manager interactive interface or the BMC Control-M/Server command line interfaces: 'ctmsetown' & 'ctmkeygen'.

The 'ctmsetown' utility is available both at the BMC Control-M/Server and the BMC Control-M/Agents accounts. When running the 'ctmsetown' utility via BMC Control-M/Agent, only the password update action is available.

5. Q. I am planning to upgrade remote host hardware in the near future. Will it have any effect on BMC Control-M?

A. If WMI is used, there is no effect and no configuration changes are required.

When using SSH communication protocol, run the "Authorize SSH Known Hosts..." option in BMC Control-M Configuration Manager for the remote host server.

- This action is available with BMC Control-M/EM 6.4.01.200 (fix-pack 2) or higher and BMC Control-M/Agent 6.4.01.100 (fix-pack 1) or higher.
- When running previous versions of those BMC Control-M components, the host entry in the 'known_hosts' file in each relevant BMC Control-M/Agent should be manually deleted.

6. Q. What types of SSH keys are supported?

A. OpenSSH and SSH2

7. Q. How does the SSH keys created and managed?

A. Agentless SSH keys can be created and managed using the "Manage Agentless SSH Keys" in BMC Control-M Configuration Manager, available with BMC Control-M/EM 6.4.01.200 (fix-pack 2) or higher and BMC Control-M/Server 6.4.01.200 (fix-pack 2) or higher.

Then the key can be selected for the relevant owner and hosts in the Owner's Authentication Settings dialog.

The private keys are saved in the BMC Control-M/Server database (encrypted) and the public keys are stored in files that should be deployed on the remote hosts SSH servers.

When using previous versions of those product components, use the 'ctmkeygen' utility in BMC Control-M/Server.

8. Q. How many SSH keys do I need?

A. You can use the same SSH key for several job's owners or use a dedicated SSH key for each owner. This decision should be taken according to your site security policy.

9. Q. Which users can update job owner's credentials?

A. When updating the credentials using the BMC Control-M Configuration Manager, the ability to manage credentials is set in the BMC Control-M/EM Authorization settings.

When updating the credentials in batch, you can run the 'ctmsetown' utility from the BMC Control-M/Server account or from BMC Control-M/Agent (for passwords changes).

COMMAND LINE SUPPORT

Most agentless-related configuration tasks can be performed either via the BMC Control-M Configuration Manager graphical interface or using command line utilities. These utilities allow mass changes of configuration settings and the ability to change the configuration settings in batch. Common utilities available for agentless scheduling:

- » "ctmhostmap" - allows the management of remote hosts connection settings
- » "ctmsetown" - allows the management of an owner's authentication settings
- » "ctmkeygen" - allows the management of SSH authentication keys

AGENT OR AGENTLESS?

BMC Control-M architecture enables the use of agentless technology side-by-side with conventional agents. The decision on when to use conventional agents and when to use agentless technology should be taken based on the following factors:

- » **Target host platform:** In order to utilize the agentless capabilities, the target host must support the agentless technology infrastructure.
- » **Operating system:** The operating system running on the remote host must be supported by the agentless technology. If your operating system is UNIX, Linux, Windows, OpenVMS, z/OS USS or OS/400 (PASE), then the agentless technology can be used. If the target host is running the Tandem Guardian or Unisys 2200 operating systems for example, use a conventional agent instead.
- » **Communication standards:** The communication standards used by the agentless technology must be available on the target host. When using the SSH standard, for example, an SSH server version 2 compliant server (such as SSH Tectia, OpenSSH, WinSSHD or F-Secure) must be available on the remote host. When using WMI, the WMI Windows service must be running on the target host.
- » **Job's Sysout:** When a job completes its execution on a remote host in agentless mode, the job's output (Sysout) is moved by default to the host of the BMC Control-M/Agent that has submitted the job. Alternatively, you can disable the Sysout transfer from the remote host to BMC Control-M/Agent in case Sysout analysis is not required. If the job's Sysout is very large, and Sysout analysis is required, consider using a conventional agent instead to avoid overloading the network traffic. The decision on whether to use the agentless technology or conventional agent should be taken in this case based on the network bandwidth capacity and load.
- » **BMC Control-M/Agent functionality:** Some of the BMC Control-M functionality requires a BMC Control-M/Agent component running on the target host:
 - **File watching:** When using a conventional agent the CTMFW utility can be used to monitor a file's availability on the target host. This utility is not available when using agentless technology. Alternatively, you can use the BMC Control-M/CM for Advanced File Transfer (version 6.3 or higher) to monitor files availability on remote hosts. This can be done using the same SSH server utilized by the agentless technology or by using native FTP server on Windows platforms (when agentless is configured for WMI)
 - **Command-line utilities:** Functionality provided by the BMC Control-M/Agent utilities (such as create jobs via ctmcreate, manipulate conditions via ctmcontb) is only available when using a conventional BMC Control-M/Agent.
- » **Control Modules:** BMC Control-M Control Modules can only be installed on conventional agents. Note however, that the number of instances required for most Control Modules is very small. For example, a single installation of the Control Module (CM) for SAP can schedule and manage all SAP jobs on multiple SAP instances within an organization. A single installation of the Control Module (CM) for AFT can manage file transfers throughout the entire enterprise. In fact, the Control Modules can be considered as "agentless" since they do not have to be installed on the same host as the application servers. For that matter, the BMC Control-M/Agent can be considered as the infrastructure behind the Control Modules and the new agentless technology can be considered as the last piece in the puzzle, acting as a "CM" for operating systems jobs.
- » **Number and frequency of jobs:** The number and frequency of jobs running on the target host should be taken into account when considering agentless vs. conventional agents. A certain overhead is added when initiating connections to remote hosts, which can delay or limit the volume of job submissions. Where high performance,

high volume, and fast throughput are essential, dedicated agents provide better support. When a simple and fast deployment of workloads on a high number of servers is required, agentless scheduling offers tremendous benefits.

- » **Owner's credentials:** Conventional agent's components are run with administrator (root) authorization levels, and therefore, the overhead of the security management is minimal. On the other hand, having the agent run as administrator on the remote host might be considered as a security issue by some sites. When BMC Control-M connects to remote hosts using the agentless technology, the connection is performed by the job's owner credentials (either user and password, or an SSH key). It requires the management of each owner's credentials in BMC Control-M (even though a single credentials entry can refer to <All> hosts rather than to each and every specific host) but on the other hand, does not require the use of administrator authorizations.

AGENTLESS ENHANCEMENTS SUMMARY

BMC CONTROL-M/AGENT 6.3.01.100 (FP1)

- » The ability to handle network disconnections between BMC Control-M/Agents and remote hosts was introduced
- » WMI support for Windows XP & Vista remote hosts was added
- » SSH support for z/OS USS (OpenEdition) was added

BMC CONTROL-M/AGENT 6.3.01.300 (FP3)

- » SSH support for OpenVMS remote hosts (Native) was added
- » WMI support for Windows Server 2008 remote hosts was added

BMC CONTROL-M 6.4.01

- » SSH support for iSeries (PASE environment) was added
- » Remote hosts operating system details (platform and version) were added to the BMC Control-M Configuration Manager graphical interface
- » The ability to validate credentials in the Owner Authentication Settings dialog in BMC Control-M Configuration Manager was added
- » The ability to manage agentless configuration settings via the BMC Control-M Configuration Manager was added

BMC CONTROL-M/AGENT 6.4.01.100

- » The ability to perform Sysout handling post processing actions (such as copy or move) on the remote hosts computer rather than on the BMC Control-M/Agent computer was added
- » The ability to authorize SSH known hosts keys via the BMC Control-M Configuration Manager for cluster support was added. This ability requires BMC Control-M/Enterprise Manager 6.4.01.200 (FP2)

BMC CONTROL-M/AGENT 6.4.01.200 (FP2)

- » The ability to update owners credentials (passwords) using the 'ctmsetown' utility via BMC Control-M/Agent was added. This ability requires BMC Control-M/Server 6.4.01.300 (FP3)
- » WMI support for Windows 7 and Windows 2008 R2 remote hosts was added

BMC CONTROL-M/AGENT 6.4.01.300 (FP3)

- » The ability to disable the Sysout copy from the remote hosts to BMC Control-M/Agent was added

BMC CONTROL-M/SERVER 6.4.01.200 (FP2)

- » The ability to manage SSH keys via the BMC Control-M Configuration Manager was added. This ability requires BMC Control-M/Enterprise Manager 6.4.01.200 (FP2)

SUMMARY

BMC Control-M agentless solution significantly reduces BMC Control-M costs by reducing the amount of BMC Control-M/Agents. It simplifies the product implementation by bundling BMC Control-M/Server and BMC Control-M/Agent installations.

Agentless technology can increase the span of control by extending the benefits of enterprise scheduling to the entire IT landscape. The agentless solution reduces the time it takes to submit the first job on a new server, allowing automatic definitions using default communication settings and first day support for new platforms.

Business runs on IT. IT runs on BMC Software.

Business thrives when IT runs smarter, faster and stronger. That's why the most demanding IT organizations in the world rely on BMC Software across both distributed and mainframe environments. Recognized as the leader in Business Service Management, BMC offers a comprehensive approach and unified platform that helps IT organizations cut cost, reduce risk and drive business profit. For the four fiscal quarters ended June 30, 2010, BMC revenue was approximately \$1.92 billion.

