Troubleshooting

Version 1.1
Contents

Troubleshooting ........................................ 1
  Installation Problems ............................... 1
    The Installation Fails ........................... 1
    The Tivoli Services will not Start ............. 1
    The Tivoli Event Service will not Start ....... 1
  Problems Operating in Workgroups and Untrusting Domains .................... 2
    How Tivoli Management Solution for Microsoft SQL Works in Untrusting Domains, Partially Trusting Domains, and Workgroups ................. 2
    Untrusting domains .............................. 2
    One way trust relationships .................... 3
    Workgroups ..................................... 4
  Event and database problems ...................... 4
    The Tivoli Event Service Hangs ................. 4
    Event Service Using Excessive CPU ............. 4
    Event Database is Large ......................... 5
    Converting to SQL Server ....................... 5
    Compacting a Jet Database ..................... 5
    Routing Events Across the Network ............. 5
      Diagnosing Problems in the Tivoli Remote Event Service .................... 5
      Diagnosing Problems in the Tivoli Event Service ................................ 6
  Other Problems .................................... 6
    Statistics Builder Causes Enterprise Service to Die 6
    IIS 4.0 Problems in the Tivoli Statistics Builder and Rule Designer .......... 7
    The Mail Action Does Not Work .................. 7
Troubleshooting

Installation Problems

The Installation Fails

A file named TivoliInstallLog.txt is created in the Tivoli Management Solution for Microsoft SQL installation directory (normally C:\Program files\TEMS) by the installation. If you experience any errors or problems during installation, the contents of this file can help diagnose the cause of the problems.

The installation creates several registry keys. From the registry editor, select the registry key:

HKEY_LOCAL_MACHINE\SOFTWARE\Heroix\TEMS

From the Registry menu, select either “Export registry file” or “Save subtree as” (depending on which registry editor you run), and save to a file.

Repeat the process with the following six registry keys, creating six more files:

HKEY_LOCAL_MACHINE\SYSTEM\Services\RoboMon_esrv
HKEY_LOCAL_MACHINE\SYSTEM\Services\RoboMon_evtsrv
HKEY_LOCAL_MACHINE\SYSTEM\Services\RoboMon_licsrv
HKEY_LOCAL_MACHINE\SYSTEM\Services\RoboMon_revtsrv
HKEY_LOCAL_MACHINE\SYSTEM\Services\RoboMon_Rule
HKEY_LOCAL_MACHINE\SYSTEM\Services\RoboMon_Tcp

Lastly, important information about your computer can be displayed by executing Msinfo32.exe, normally found in the C:\Program Files\Common Files\Microsoft Shared\MSInfo directory. From the File menu, select Save, and a file named Msinfo32.txt file is written to the C:\WINNT directory.

Please send all of these files to your support representative.

The Tivoli Services will not Start

The most common reasons that the Tivoli services do not start are account/password problems or insufficient privileges for the Tivoli services account. The Tivoli services must run from an account with administrator privileges. After the installation, you may change the account and password, and start each of the Tivoli services from the Services applet of Control Panel.

The Tivoli Event Service will not Start

Under some circumstances, the Tivoli Event Service will fail to start, often indicating an error code of 2140.

The Tivoli Event Service opens an ODBC system data source named “RoboMon Event Database”. From the ODBC applet of Control panel, check that this data source exists in the System DSN tab and does not exist in the User DSN tab. Also, double-click “RoboMon Event Database” in the System DSN tab and make sure the database for this DSN is “EventDatabase.mdb” in Tivoli Management Solution for Microsoft SQL \event\database directory. If this is not correct, change the data source to point to the correct database file.
If all this is correct, there are two registry keys that you can create that will help diagnose the problem. Please be especially careful when modifying the Windows NT registry. If they do not currently exist, create the following registry keys and value entries with the Registry Editor under HKEY_LOCAL_MACHINE\SOFTWARE\Heroix\TEMS\Debug:

<table>
<thead>
<tr>
<th>Key</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ErrorTracking</td>
<td></td>
</tr>
<tr>
<td>Value entry name</td>
<td>RoboMon_evtsrv</td>
</tr>
<tr>
<td>Data type</td>
<td>DWORD</td>
</tr>
<tr>
<td>Value</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Key</th>
<th>Instrumentation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value entry name</td>
<td>RoboMon_evtsrv</td>
</tr>
<tr>
<td>Data type</td>
<td>DWORD</td>
</tr>
<tr>
<td>Value</td>
<td>3</td>
</tr>
</tbody>
</table>

Then, attempt to restart the Tivoli Event Service from the Services applet of Control panel. Please send the following two files to your support representative:

- In Tivoli Management Solution for Microsoft SQL \logs directory, the most recent daily Event Server log file (for example, “Event_Server_1999_01_15.log”).
- In Tivoli Management Solution for Microsoft SQL \debug directory, “RoboMon_evtsrv_ErrorTracking.log”.

## Problems Operating in Workgroups and Untrusting Domains

### How Tivoli Management Solution for Microsoft SQL Works in Untrusting Domains, Partially Trusting Domains, and Workgroups

#### Untrusting domains

**Management functions (Tivoli Management Solution for Microsoft SQL user interface)**

To perform management functions between untrusting domains, the account/password pair with which the user logs on to the machine is the critical factor. If the account/password pair used to log on to the machine being used to administer Tivoli Management Solution for Microsoft SQL (as differentiated from the account/password pair used by the Tivoli services) exists as a local account/password pair on the remote machine to be administered, full functionality will be available to the user. It is critical that this account exist as a local account/password pair on the remote machine, as opposed to a domain account in the remote, untrusting domain. Because the domains do not trust each other, domain accounts are invalid.

**Event and performance data forwarding**

To forward events and performance data between untrusting domains, the account/password pair assigned to the Tivoli services is the critical factor. If the account/password pair assigned to the Tivoli services on the machine forwarding events and performance data (as differentiated from the account/password pair used to log on to the machine) exists as a local account/password pair on the remote machine to be administered, events
and performance data will be successfully forwarded. It is critical that this account exist as a local account/password pair on the remote machine, as opposed to a domain account in the remote, untrusting domain. Because the domains do not trust each other, domain accounts are invalid.

Summary of Tivoli Management Solution for Microsoft SQL operations between untrusting domains

1. The account does not exist locally on the target machine: Operation fails.
2. The account exists locally on the target machine, but the password does not match: Operation fails.
3. The account exists locally on the target machine and the password matches: Operation succeeds.

One way trust relationships

Management functions (Tivoli Management Solution for Microsoft SQL user interface)

When managing a remote, trusting domain, as with untrusting domains, the account/password pair with which the user logs on is the key factor. The logon account/password pair must exist on either the local machine or as a domain level account/password pair. If an account with the same username but a different password exists on the local machine, the operation will fail, regardless of whether the account/password pair is a valid domain account. Additionally, the information in the Event Configuration Manager interface can only be accessed if the account/password pair exists on the local machine. If a domain account is being used, the Event Configuration information for the remote machine cannot be accessed. (Note that events and performance data can still be forwarded, it is merely the information displayed in the Event Configuration Manager interface which cannot be accessed). When attempting to manage the trusted domain from the trusting domain in a one way trust relationship, the rules of operation for untrusting domains applies.

Event and performance data forwarding

When forwarding events and performance data from a trusted domain to a trusting domain, as with untrusting domains, the account/password pair that is assigned to the Tivoli services is the key factor. The account/password pair used by the Tivoli services must exist on either the local machine or as a domain level account/password pair. If an account with the same username but different password exists on the local machine, the operation will fail, regardless of whether the account/password pair is a valid domain account. When attempting to forward events from the trusting domain to the trusted domain in a one way trust relationship, the rules of operation for untrusting domains applies.

Summary of Tivoli Management Solution for Microsoft SQL operations in a partially trusting environment (trusted domain to trusting domain)

1. The account does not exist either locally or at the domain level on the target machine: Operation fails.
2. The account exists locally on the target machine, but the password does not match: Operation fails.
3. The account exists locally on the target machine and the password matches: Operation succeeds.
4. The account exists at the domain level on the target machine, but the password does not match: Operation fails.
5. The account exists at the domain level on the target machine and the password matches: Operation succeeds.

Workgroups

Installing to a machine in a workgroup
When installing Tivoli Management Solution for Microsoft SQL on a machine which is part of a workgroup, it is still necessary to provide a domain name, account name, and password for the Tivoli services. The domain name used should be the name of the local machine, as opposed to the name of the workgroup. The account/password pair must exist on the local machine.

Managing remote machines in a workgroup
To enable management of remote machines within a workgroup, the account/password pair with which the user logs on must exist as a local account/password pair on the remote machine.

Forwarding events and performance data within a workgroup
When forwarding events within a workgroup, the account/password pair used by the Tivoli services must exist as a local account/password pair on the remote (receiving) machine.

Managing/Event and performance data forwarding between a workgroup and a domain
The rules for managing and forwarding between untrusting domains apply.

Event and database problems

The Tivoli Event Service Hangs
A problem in the Jet database driver installed with Microsoft Access 97 can cause database queries to hang when running on a dual processor computer. If you are running Tivoli Management Solution for Microsoft SQL on a dual processor computer, and the Tivoli Event Configuration Manager is not responding or events are not being forwarded correctly, you may be experiencing this problem. This problem is documented in TechNet article Q178650 and can be resolved by installing a newer version of the Jet database driver. TechNet article Q172733 describes the procedure of downloading and installing the version of Jet driver that corrects this situation.

Event Service Using Excessive CPU
When the Tivoli Event Service is using excessive CPU, it is often due to exceptionally large quantities of events from the Windows NT event log, or due to large quantities of SNMP traps. If this is the case, you can disable processing of these events with the Tivoli Event Configuration Manager. If this is not the case, run the Tivoli Event Configuration Manager and set the Debug mode to “3” for this computer. Doing so will cause the Tivoli Event Service to log information about its behavior to a daily log file in Tivoli Management Solution for Microsoft SQL "event\logs directory. Please send the most recent “.log” file in this directory to your support representative.
Event Database is Large

The size of Tivoli Management Solution for Microsoft SQL event database can grow large over time.

Converting to SQL Server

If you are consolidating events from many computers, we recommend that you convert your event database to SQL Server, because it handles large databases better than Jet. You may convert your event database to SQL Server as follows (click here for more details):

Create a database using SQL Server Enterprise Manager.

From SQL Server Enterprise Manager, highlight the newly created database and run the RoboMon_EventDatabase_CreateTables.SQL script to create the tables. This script is located in Tivoli Management Solution for Microsoft SQL \config directory.

Update the ODBC System DSN “RoboMon Event Database” to point to your newly created SQL Server database.

Compacting a Jet Database

Beginning in V7.5, Tivoli Management Solution for Microsoft SQL can automatically compact your jet event database using the utility program, RoboMon_compact.exe. This program can also be used to compact your performance database. The Admin rule, Compact_Databases, does this automatically every night. RoboMon_compact is executed from a command line, and can take the following switches:

- /E Compact the event database
- /P Compact the performance database
- /A Compact the event database and the performance database
- /V Verbose mode

Routing Events Across the Network

When you run the Tivoli Event Monitor from any computer, you will see the events from all computers that have been configured to forward events to this computer. The forwarding of events from one computer to another is specified in the Tivoli Event Configuration Manager. Tivoli Management Solution for Microsoft SQL must be configured to run from a domain account with administrator privileges to be able to do this. It can not be configured to run from the local system account.

Diagnosing Problems in the Tivoli Remote Event Service

If Tivoli Management Solution for Microsoft SQL is configured properly, and forwarding of events is not happening, from the Services applet of Control panel, make sure that the Tivoli Remote Event Service is running on the computer that should be receiving events. If it is running, try stopping and restarting this service.

If the problem persists, there is a registry key that you can create that will help diagnose the problem. Please be especially careful when modifying the Windows NT registry. If it does not currently exist, create the following registry key and value entry on the computer that should be receiving events with the Registry Editor under HKEY_LOCAL_MACHINE\SOFTWARE\Heroix\TEMS\Debug:

<table>
<thead>
<tr>
<th>Key</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ErrorTracking</td>
<td>ErrorTracking</td>
</tr>
</tbody>
</table>

Troubleshooting 5
<table>
<thead>
<tr>
<th>Value entry name</th>
<th>RoboMon_revtsrv</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data type</td>
<td>DWORD</td>
</tr>
<tr>
<td>Value</td>
<td>1.</td>
</tr>
</tbody>
</table>

Restart the Tivoli Remote Event Service, and send the following file to your support representative:

In Tivoli Management Solution for Microsoft SQL \debug directory, “RoboMon_revtsrv_ErrorTracking.log”.

### Diagnosing Problems in the Tivoli Event Service

You can also create the following registry key and value entry on both the computer sending events and the one receiving events under HKEY_LOCAL_MACHINE\SOFTWARE\Heroix\TEMS\Debug:

<table>
<thead>
<tr>
<th>Key</th>
<th>ErrorTracking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value entry name</td>
<td>RoboMon_evtsrv</td>
</tr>
<tr>
<td>Data type</td>
<td>DWORD</td>
</tr>
<tr>
<td>Value</td>
<td>1.</td>
</tr>
</tbody>
</table>

Also, run the Tivoli Event Configuration Manager and set the Debug level to 3 for both the computer sending events and the one receiving events.

Restart the Tivoli Event Service on each computer, and send the following files from each computer to your support representative:

- In Tivoli Management Solution for Microsoft SQL \debug directory, “RoboMon_evtsrv_ErrorTracking.log”.
- In Tivoli Management Solution for Microsoft SQL \logs directory, the most recent daily Event Server log file (for example, “Event_Server_1999_01_15.log”).

### Other Problems

#### Statistics Builder Causes Enterprise Service to Die

The Tivoli Statistics Builder uses the Microsoft function, RegQueryValueEx, with the predefined HKEY_PERFORMANCE_DATA key to collect Windows NT performance objects and counters. Under some circumstances this function may cause an access violation in the Tivoli Management Solution for Microsoft SQL Service. The problem is caused when a Microsoft DLL used to get data for a specific performance object, known as a performance monitor extension, is corrupted.

The first thing you should do if you experience this problem is to restart the Tivoli Management Solution for Microsoft SQL service from the Services applet of Control Panel. You should then be able to continue using the Tivoli Statistics Builder normally.

The permanent solution to this problem involves determining which DLL is causing the problem, and renaming it. We have seen this problem in SQLCTR60.DLL, which is referenced by the value entry “Library” in the following registry entry:

HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\MSSQLServer\Performance
Renaming “SQLCTR60.DLL” to “XSQLCTR60.DLL” avoids the problem. However, this also disables the collection of performance information in all SQL Server performance objects. A detailed explanation of this problem and its solution is found in Microsoft TechNet article Q178887.

**IIS 4.0 Problems in the Tivoli Statistics Builder and Rule Designer**

A problem with Microsoft Internet Information Server (IIS) version 4.0 may prevent the Tivoli Statistics Builder from seeing performance monitor objects provided by IIS. This problem may also cause the Tivoli Rule Designer to produce errors when creating certain actions, and when saving a rule. This problem is documented in TechNet article Q192224, and a fix described in this article is available.

**The Mail Action Does Not Work**

A problem in Microsoft SQL may cause Tivoli’s mail action to fail when Tivoli Management Solution for Microsoft SQL is configured to use Microsoft SQL for the mail action. The action error log file, located in Tivoli Management Solution for Microsoft SQL \logs directory will contain the error “Unknown MAPI error”. This problem is documented in TechNet article Q179116, and is fixed in Microsoft SQL version 5.5, Service Pack 1.

If you experience this problem, do one of the following:

1. Install Microsoft SQL version 5.5, Service Pack 1.
2. Configure Tivoli Management Solution for Microsoft SQL to use SMTP, rather than Microsoft SQL, for the mail action.
3. Disable Tivoli Management Solution for Microsoft SQL ability to collect COM statistics by creating the registry value “COMDisable” with a data type of “DWORD” and a value of “1” in the following registry key:

   HKEY_LOCAL_MACHINE\SOFTWARE\Heroix\TEMS\Config

   **Note:** Doing this will prevent you from collecting COM statistics, and will prevent the Microsoft Transaction Server rules from operating correctly.

After making one of these changes, you will need to restart the rule process or processes before the mail action will begin working.