

# IBM Tivoli Monitoring V6.1

How to run a SOAP query with the SOAP client  
command-line utility kshsoap



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IBM Tivoli® Monitoring V6.1, How to run a SOAP query with the SOAP client command-line utility kshsoap.

## Assumptions

### Environment configuration

- IBM Tivoli Monitoring V6.1 or later is installed
- Basic concept of SQL query
- Basic concept of SOAP methods

The lesson developer assumes that IBM Tivoli Monitoring V6.1 or later is installed in your environment and that you know basic information about the SOAP query and SOAP methods.

## Objectives

When you complete this module, you can perform these tasks:

- Run the SOAP query with the command-line utility on Windows®
- Run the SOAP query with command-line utility on Linux® or UNIX®
- Debug the SOAP query

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- Run the SOAP query with command line utility on Windows
- Run the SOAP query with command line utility on Linux or UNIX
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## Outline

- Running a SOAP query on a Windows system
- Running a SOAP query on a Linux or UNIX system
- Advanced Peer-to-Peer Networking (APPN)
- Debugging technique
- Important links and technotes
- Summary

This lesson introduces briefly how to run a SOAP query with the command-line utility kshsoap on Windows, Linux, and UNIX systems. It presents debugging techniques for debugging the SOAP query.

## Running a SOAP query on a Windows system (1 of 2)

- On the Tivoli Enterprise Monitoring Server system where the SOAP server is installed, change to the **Install\_dir\cms** directory
- Create a text file named SOAPREQ.txt and type in any valid SOAP request
- Example:

```
<CT_Get><object>ManagedSystem</object></CT_Get>
```

If security is enabled, type this request:

```
<CT_Get><userid>logonid</userid><password>password</password>  
<object>ManagedSystem</object></CT_Get>
```

The next slides show what you need to do to use the utility to run a SOAP query in a Windows environment. Afterward, you see how to use this command in a Linux or UNIX environment.

On the Tivoli Enterprise Monitoring Server system where the SOAP server is installed, change to the **Install\_dir\cms** directory, where **install\_dir** is the Tivoli Monitoring installation directory.

Create a text file **SOAPREQ.txt** and type any valid SOAP request as shown in the example. You can create the **SOAPREQ.txt** file in any directory. For this example, create the **SOAPREQ.txt** file in the **Install\_dir\cms** directory.

Notice that if security is enabled, you must add the user ID and password to the command.

## Running a SOAP query on a Windows system (2 of 2)

- Create another text file named **SOAPURLS.txt** containing the URL to receive the SOAP request
- Example:
  - The name of the receiving system is companylocalhost
  - The hub monitoring server is installed on companylocalhost  
**http://companylocalhost:1920//cms/soap**
  - To run a SOAP query, enter this command at the command line:  
`kshsoap SOAPREQ.txt SOAPURLS.txt`
- Results:
  - The **kshsoap** utility processes the **SOAPREQ** file and displays the URL destination and request
  - It sends the SOAP request to each URL listed in the URL file, and then displays the URL and the response message that is received

Create another text file named **SOAPURLS.txt**, which contains the URL to receive the SOAP request. In this example, companylocalhost is the name of the receiving system and is the location where the hub monitoring server is installed.

Run the SOAP query **kshsoap SOAPREQ.txt SOAPURLS.txt**.

The kshsoap utility processes the SOAPREQ file and displays the URL destination and request. It sends the SOAP request to each URL listed in the URL file and then displays the URL and the response message that was received.

## Results of running a SOAP query on a Windows system

The expected results of the command are shown (only partial rows are shown here):

```
C:\IBM\ITM\CMS>kshsoap.exe soapreq.txt soapurl.txt
===== SoapRequest: 'http://rrsahana:1920//cms/soap' l'47
<CT_Get><object>ManagedSystem</object></CT_Get>=====
<<===== SoapResponse: 'http://rrsahana:1920//cms/soap' l'3745
<?xml version="1.0" encoding="UTF-8"?>
<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/" SOAP-
ENV:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"> <SOAP-ENV:Body><SOAP-CHK:Success xmlns:SOAP-CHK =
"http://soapstest1/soapstest/" xmlns="udle-soap:attributes"><TABLE name="O4SRV.INODESTS">
<OBJECT>ManagedSystem</OBJECT>
<DATA>
<ROW>
<Timestamp>1120508143550000</Timestamp>
<Host_Address><![CDATA[<IP.PIPE>#9.xx.xx.xx[1918]</IP.PIPE><IP6.PIPE>{::1}[1918]
</IP6.PIPE><IP6>{::1}[1918]</IP6><IP6.S
PIPE>{::1}[3660]</IP6.SPIPE>]]></Host_Address>
<Host_Info></Host_Info>
<Name>HUB_HOSTNAME</Name>
<Type></Type>
<Status>* ONLINE</Status>
<Reason>00</Reason>
<Product>EM</Product>
<Managing_System>HUB_HOSTNAME</Managing_System>
<Version>06.23.00</Version>
</ROW>
</DATA>
</TABLE>
</SOAP-CHK:Success></SOAP-ENV:Body></SOAP-ENV:Envelope>
```

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Here are the results from running the soap query in the example. The returned rows are highlighted in bold red. They start at <Timestamp> and end at <Version>. For the example, not all the retrieved rows are shown.

```
<CT_Get><object>ManagedSystem</object></CT_Get>
```

## Running a SOAP query on a Linux or UNIX environment

- On the Tivoli Enterprise Monitoring Server system where the SOAP server is installed, run the kshsoap script that is located in the **Install\_dir/interp/ms/bin** directory
- Create a text file **SOAPREQ.txt** and type in any valid SOAP request
- Example:

```
<CT_Get><object>ManagedSystem</object></CT_Get>
```

If security is enabled, type this request:

```
<CT_Get><userid>logonid</userid><password>password</password>  
<object>ManagedSystem</object></CT_Get>
```

- Create the text file **SOAPURLS.txt** that contains the URLs to receive the SOAP request. In this example, companylocalhost is the name of the receiving system and the location where the hub monitoring server is installed:

```
http://companylocalhost:1920///cms/soap
```

- On the command line, enter **./kshsoap SOAPREQ.txt SOAPURLS.txt**

The procedure to use the utility is the same as for Windows with the exception that the utility binary is in a different directory. In this example, the utility is in the **Install\_dir/interp/ms/bin** directory.



## Advanced Peer-to-Peer Networking (APPN)

- If you run the **kshsoap** command on systems that have Advanced Peer-to-Peer Networking (APPN) installed, you might encounter an error message that states that an APPN file must be configured  
APPN is an extension to the Systems Network Architecture (SNA)
- To resolve this situation, modify the environment variable **KDE\_WAPPC32** from the command-line window where you run the **kshsoap** command in **SET KDE\_WAPPC32=none**

APPN is Advanced Peer-to-Peer Networking, an extension to the Systems Network Architecture (SNA). When running the **kshsoap** command on systems that have APPN installed, you might encounter an error message that states that an APPN file needs to be configured. To resolve this situation, modify the environment variable **KDE\_WAPPC32** from the command-line window from where you are going to run the **kshsoap** command in **SET KDE\_WAPPC32=none**.

## Debugging

- Set this trace to debug the SOAP query and contact IBM support with **pdcollect**
  1. Edit the appropriate HUB Tivoli Enterprise Monitoring Server configuration file
    - Windows: %itm\_install%\cms\kbbenv
    - Linux or UNIX: \$itm\_install\config\    - z/OS®: &rhilev.&rte.RKANPARU(KppENV)
  2. Replace **KBB\_RAS1** with **KBB\_RAS1=ERROR (UNIT:KSH ALL)**
  3. Stop and start the HUB Tivoli Enterprise Monitoring Server
  4. Re-create the problem by running the SOAP utility
  5. Collect the **pdcollect** and send it to IBM Support
- If you cannot stop and start the Tivoli Enterprise Monitoring Server, use the procedures in the link Dynamically modify trace settings for an IBM Tivoli Monitoring component:  
<http://www-01.ibm.com/support/docview.wss?uid=swg21266129>

Finally, how to debug the SOAP query. If you do not see the expected result, you must collect data to debug.

Use the procedures in the provided link to set the trace manually or dynamically. Use **pdcollect** from the HUB Tivoli Enterprise Monitoring Server to collect the data. For manual setting, you must stop and start the Tivoli Enterprise Monitoring Server for the trace to be effective. After you collect the data, send it to IBM support.

## Links and technotes

- Details and useful technotes about SOAP methods:

[http://pic.dhe.ibm.com/infocenter/tivihelp/v15r1/index.jsp?topic=%2Fcom.ibm.itm.doc\\_6.2.3%2Fsoapmethods.htm](http://pic.dhe.ibm.com/infocenter/tivihelp/v15r1/index.jsp?topic=%2Fcom.ibm.itm.doc_6.2.3%2Fsoapmethods.htm)

- 1421745: Invalid SOAP query shut down the HUB TEMS:  
<http://www-01.ibm.com/support/docview.wss?uid=swg21421745>
- 1469233: Historical Soap query returns no data:  
<http://www-01.ibm.com/support/docview.wss?uid=swg21469233>
- 1380979: Sending or forwarding a soap request to Remote sources:  
<http://www-01.ibm.com/support/docview.wss?uid=swg21380979>
- 1606047: SOAP call fails for Universal Agent SNMP attribute groups:  
<http://www-01.ibm.com/support/docview.wss?uid=swg21606047>

All the available SOAP methods are documented and available in the provided links. Also, see some of the useful technotes. They address some known issues.

## Summary

Now that you completed this module, you can run a SOAP query with the command-line utility on Windows, Linux, or UNIX systems

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