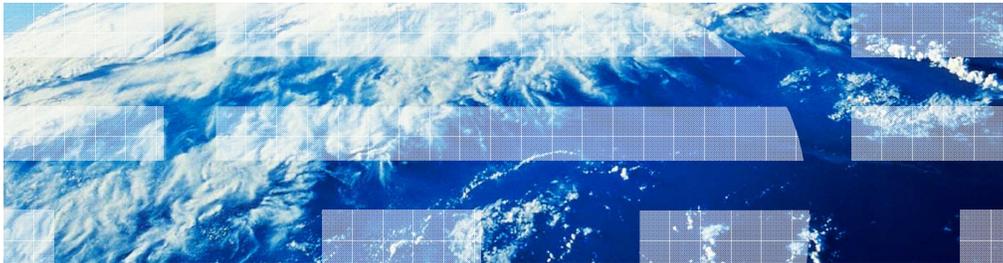


# IBM Tivoli Monitoring and Tivoli Netcool/OMNIbus

## Installation of a situation update forwarder



In this training module, you learn how to install a situation update forwarder on IBM Tivoli<sup>®</sup> Monitoring and Tivoli Netcool<sup>®</sup>/OMNIbus. You also learn how to send Tivoli Monitoring events to Tivoli Netcool/OMNIbus, resynchronize them with Tivoli Monitoring, and troubleshoot the situation update forwarder.

## Situation update forwarder installation

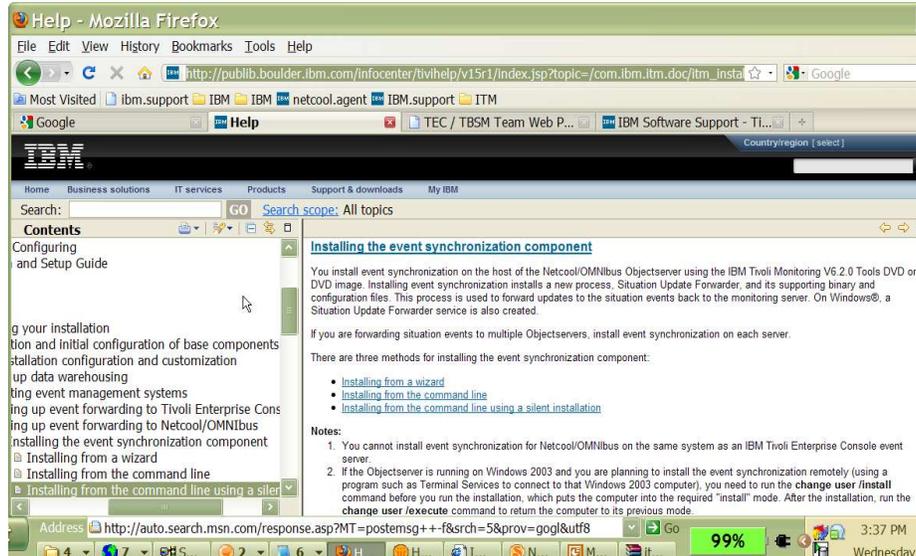
- Installation guide for situation update forwarder (SUF)  
[http://publib.boulder.ibm.com/infocenter/tivihelp/v15r1/index.jsp?topic=/com.ibm.itm.doc/itm\\_install313.htm](http://publib.boulder.ibm.com/infocenter/tivihelp/v15r1/index.jsp?topic=/com.ibm.itm.doc/itm_install313.htm)
- PassPort Advantage part number C167UEN.tar
  - Has IBM Tivoli Monitoring V6.2.0 Tools
  - Includes agentbuilder dm\_upgrade itm5\_upgrade tec
- Steps to install on AIX®
  - cd tec...
  - Run ESync2000AIX.bin
  - Run /opt/IBM/SitForwarder
- Installations for other operating systems are in the /TEC folder

A comprehensive installation guide for Situation Update Forwarder is available at the website shown on the slide.

You can use the PassPort Advantage part number shown on the slide to obtain a 3 GB download that contains IBM Tivoli Monitoring V6.2.0 Tools. It includes all the operating systems for Situation Update Forwarder. You can download it one time and FTP the parts you need for the required operating systems.

In this example, you go to the directory where you extracted the EventSync product and run ESync2000AIX.bin to install the product on AIX. Then, you run /opt/IBM/SitForwarder. The installations for the other operating systems contained in this download are in the /TEC folder.

## Installation wizard page



Use the installation wizard to install the event synchronization component. Click the **Install from a wizard** link.

## Installation wizard



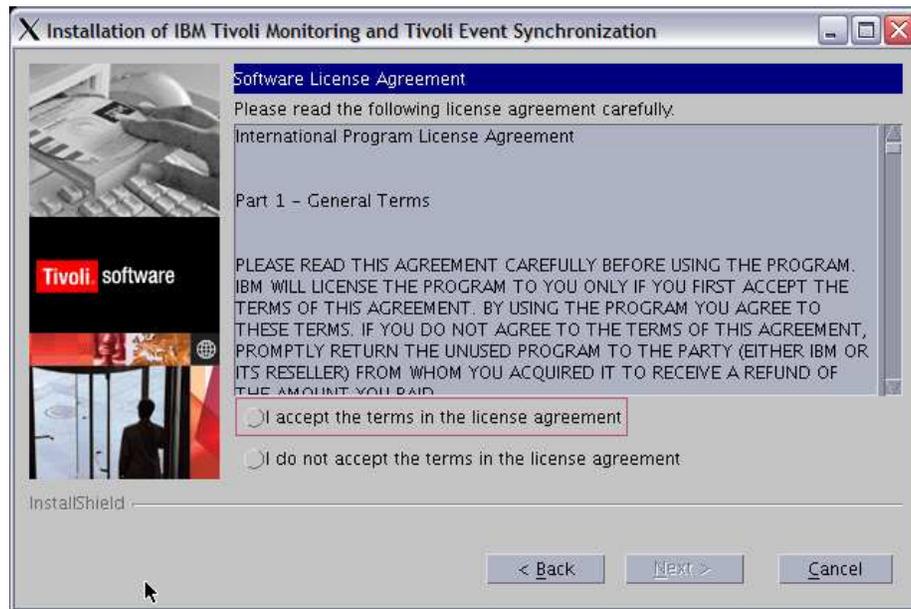
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Installation of a situation update forwarder

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Click **Next**.

## License agreement



Accept the license agreement.

## Installation path



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Installation of a situation update forwarder

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Install Situation Update Forwarder in the /opt/IBM path to create a SitForwarder directory in that location.

## situpdate.conf

Installation of IBM Tivoli Monitoring and Tivoli Event Synchronization

Name of configuration file  
situpdate.conf

Number of seconds to sleep when no new situation updates  
3

Number of bytes to use to save last event  
50

URL of the TEMS SOAP server  
cms/soap

Rate for sending SOAP requests to TEMS from Event Sync via Web Services  
10

Level of debug detail for log  
low  
low  
med  
verbose

< Back   Next >   Cancel

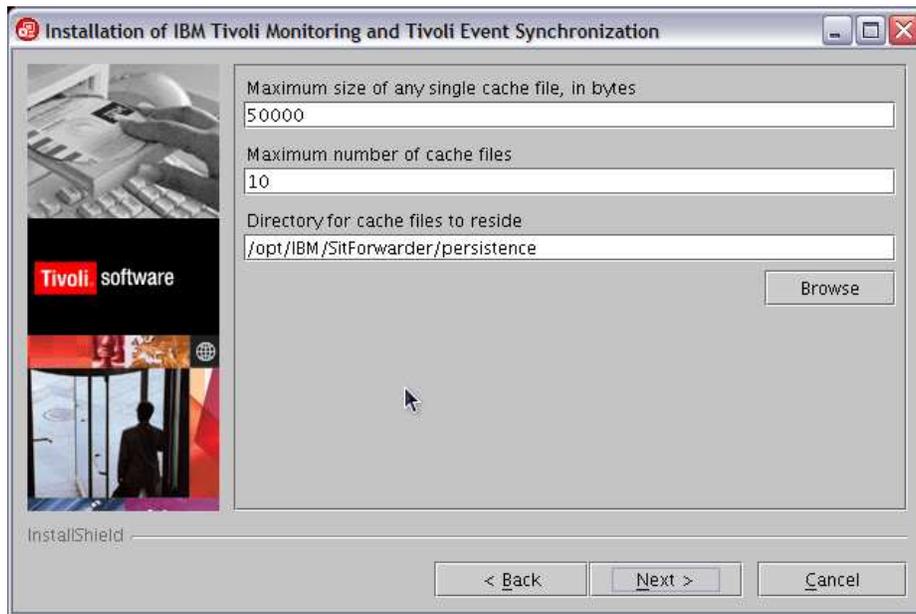
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Installation of a situation update forwarder

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From this page of the wizard, you generate the situpdate.conf file. Set the Level of debug detail for log to **verbose** and click **Next**.

## Persistence directory



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On this page of the wizard, you set up your persistence directory for debugging.

## situpdate.conf file

```
fileLocation="/opt/IBM/SitForwarder/persistence"  
pollingInterval=3  
crcBytecount=50  
cmsSoapUrl=cms/soap  
bufferFlushRate=10  
logLevel=verbose
```

In this example, the directory log level has been preset to verbose. Set your file location for the situpdate.conf file to **/opt/IBM/SitForwarder/persistence**. Set the polling interval to 3. Set the crcBytecount to 50 and the cms soap URL to cms. Set the buffer flush rate to 10.

## Tivoli Enterprise Monitoring host name, user ID, and password

Installation of IBM Tivoli Monitoring and Tivoli Event Synchronization

Tivoli Enterprise Monitoring server Information

Host name	User ID

Edit

Remove

Host name User ID Password Confirmation

Add

< Back Next > Cancel

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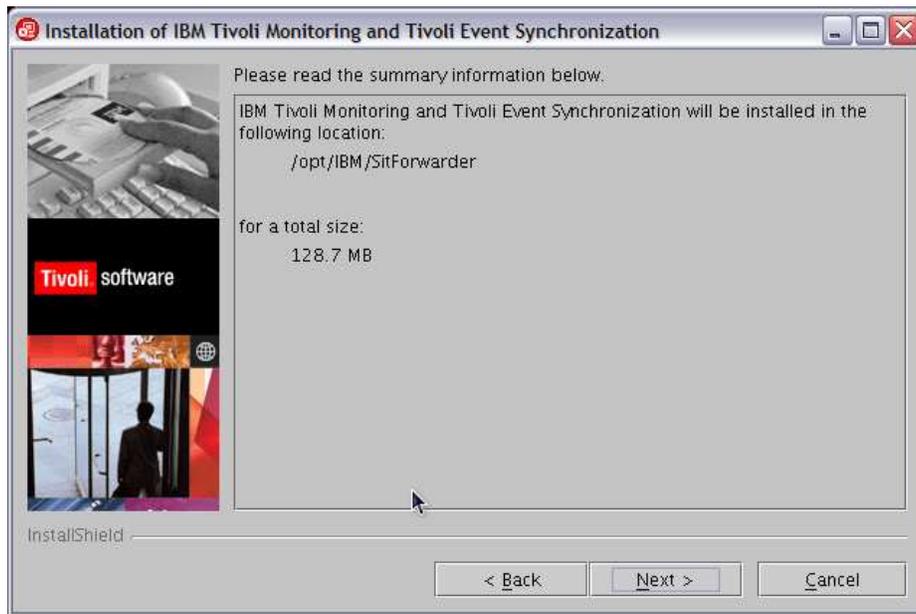
You use this page of the wizard to create the Tivoli Enterprise Monitoring server location. You also enter the host name of the Tivoli Monitoring server and the user ID. Set and confirm your password here. The file is automatically encrypted after you enter the necessary information.

## situser.conf file

```
serverid=sles10.tivlab.austin.ibm.com  
userid=root  
passwordfile="/opt/IBM/Netcool/omnibus/SitForwarder/etc/sles10.tivlab.austin.ibm.com.pwd
```

This is an example of the situser.conf file. The server ID is for the Tivoli Enterprise Monitoring server. The user ID in this case is root, and the encrypted file is in the situser.conf file in the SitForwarder/etc path.

## Installation



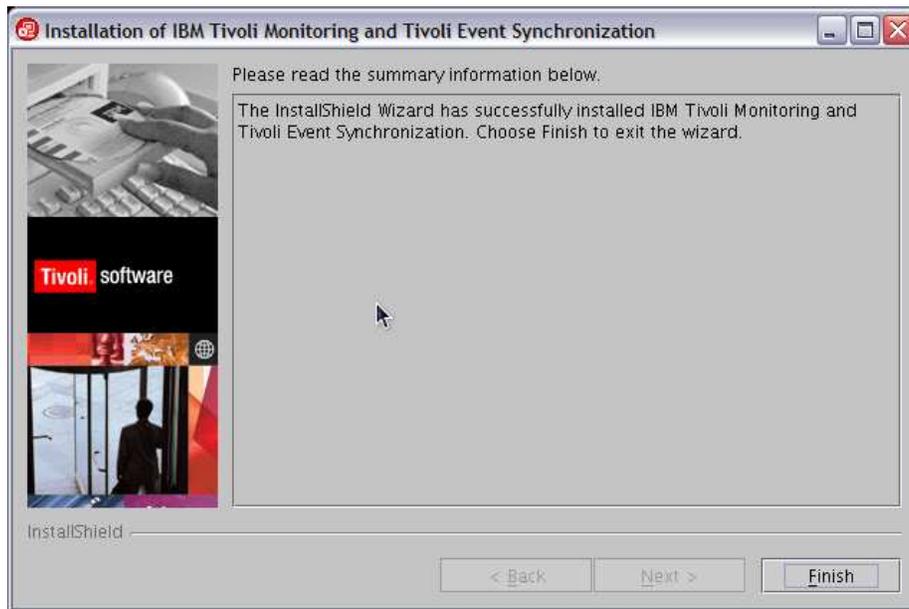
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Installation of a situation update forwarder

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Confirm the installation parameters and click **Next**.

## Finishing the installation



Click **Finish**.

## Process automation setup

### Configuring the OMNibus server for program execution from scripts

To run the event synchronization program from SQL automation scripts for sending synchronization events to the monitoring server, the OMNibus event server must be running under process control and the properties **PA.Username** and **PA.Password** must be set in `OMNIHOME/etc/NCOMS.props` file, where `OMNIHOME` is the system-defined variable defining the installation location of OMNibus.

For Linux and UNIX: By default, the process control grants access to the members of the default group `ncoadmin`. For default configuration, create a `ncoadmin` group, and add `root` as a user to this group. The **PA.Username** property must be set to the username for connecting to the process control agent. The default value is `root`. The **PA.Password** property must be set to the password for the user connecting to the process control agent. For the default setting, specify the password of the root user.

For Windows: The **PA.Username** property must be set to a Windows account name, and the **PA.Password** property must be set to the password for that account.

Refer to OMNibus documentation for more information on configuring OMNibus server under process control and for information on the `nco_pa_crypt` utility that encrypts the `PA.Password` property value.

After you change the **PA.Username** and **PA.Password** properties in the `OMNIHOME/etc/NCOMS.props` file, perform the procedure below to restart the OMNibus Object Server:

On this page, you learn how to set up automation scripts to start and stop the OMNibus server.

## Stop and restart process automation

After you change the **PA.Username** and **PA.Password** properties in the `OMNIHOME/etc/NCOMS.props` file, perform the procedure below to restart the OMNibus Object Server:

1. Stop the OMNibus server:

- On Windows®: In the Control Panel, open Administrative Tools, then Services. In the list of services, double-click OMNibus server, then click Stop.
- On UNIX®: Issue the following command from command line

```
$OMNIHOME/bin/nco_pa_stop -process server_name
```

where:

**\$OMNIHOME**

Is the system-defined variable defining the installation location of OMNibus.

**server\_name**

Is the OMNibus Object Server name defined for process control.

2. Restart the OMNibus server.

- On Windows: In the list of services, double-click OMNibus server, then click Start.
- On UNIX: Issue the following command from command line:

```
$OMNIHOME/bin/nco_pa_start -process server_name
```

When you institute triggers in OMNibus with SQL and IBM Tivoli Monitoring update triggers, those triggers are logged in the NCO\_PA log.

## Update the OMNIBus database SQL

### Updating the OMNIBus database schema

The command to configure OMNIBus pipes the SQL command set into the SQL command line tool and performs the updates to the Object Server.

1. Update the Object Server database with the following commands:
  - o On Windows®:

```
%OMNIHOME%\..\bin\redist\isql -U username
-P password
-S server_name
< path_to_file \itm_proc.sql

%OMNIHOME%\..\bin\redist\isql -U username
-P password
-S server_name
< path_to_file \itm_db_update.sql

%OMNIHOME%\..\bin\redist\isql -U username
-P password
-S server_name
< path_to_file \itm_sync.sql
```

Update the OMNIBus SQL command database. You must install Situation Update Forwarder to obtain these command scripts. To update the database without running Situation Update Forwarder, omit the **ITM\_sync.SQL** command. The commands shown here are for the Windows® operating system.

## Commands for updating SQL

◦ On UNIX:

```
$OMNIHOME/bin/nco_sql -user username  
-password password  
-server server_name  
< path_to_file/itm_proc.sql  
  
$OMNIHOME/bin/nco_sql -user username  
-password password  
-server server_name  
< path_to_file/itm_db_update.sql  
  
$OMNIHOME/bin/nco_sql -user username  
-password password  
-server server_name  
< path_to_file/itm_sync.sql
```

These commands are for UNIX® platforms. Running these scripts overwrites any custom commands that you wrote. If you wrote custom commands, copy those commands to ensure that they are not overwritten.

## Error regarding SQL scripts

**Notes:**

1. "Object exists" and "Attempt to insert duplicate row" errors will occur if the scripts were previously run. These errors are harmless.
2. The schema updates in `icm_db_update.sql` add a number of columns to the `alerts.status` table for the Object Server. If any Object Server gateways forward from the Object Server, consider adding these columns to the gateway mapping file. Also, if the IBM Tivoli Monitoring fields will be viewed in both Object Servers, run the schema updates on the other Object Server as well.
3. If you are integrating IBM Tivoli Monitoring and Tivoli Business Service Manager, add the Tivoli Business Service Manager schema updates before you add the Tivoli Monitoring schema updates. If you add the Tivoli Monitoring schema updates before the Tivoli Business Service Manager schema updates, rerun the procedure above to add the IBM Tivoli Monitoring schema updates again to ensure the latest definitions are used.

After updating the OMNibus schema with the Tivoli Monitoring updates, run the Tivoli Business Service Manager discover schema utility (`rad_discover_schema`). Refer to the Tivoli Business Service Manager Information Center for detailed instructions on using this utility:

<http://publib.boulder.ibm.com/infocenter/tivihelp/v3r1/index.jsp?topic=/com.ibm.tivoli.itbsm.doc/welcome.htm>

After running the discover schema utility, remember to restart the Tivoli Business Service Manager Dataserver. Failure to do so can cause connection problems.

This error message is displayed if you run commands more than once.

## Write permissions regarding SQLs

4. If the OMNibus Object Server is running on UNIX as a non-root user and the event synchronization component is installed and run as either root or another user, verify that the user under which the Object Server is running has write permission to the `event_sync_install_dir\log` directory prior to updating the OMNibus database schema.

The OMNibus Object Server might be running as non-root user, and the event synchronization component might be installed as either root or another user. Verify that the Object Server has write permissions to the `event_sync_install` directory before updating the OMNibus database schema. To avoid errors and missed event flow, run the installation as the same user and with the same permissions as the OMNibus server.

## EIF probe and rules

### Configuring the EIF probe

This step configures the probe with the rules for mapping situation events to OMNibus events. Configuring the mapping involves updating the `tivoli_eif.rules` file installed with the probe with the rules for IBM Tivoli Monitoring events. If you are merely integrating Tivoli Monitoring with Netcool/OMNibus, use the contents of the `tivoli_eif.rules` file included with the synchronization component.

However, if you are integrating IBM Tivoli Monitoring with both Tivoli Business Service Manager and Netcool/OMNibus, use the `tivoli_eif.rules` file provided with Tivoli Business Service Manager's EIF probe installation and the `itm_event.rules` and `tbsm_eif_event.rules` rules files included with the synchronization component.

You must recycle the probe after you update any of the rules files.

Configure the EIF probe. The EIF probe defaults to port 9999. The EIF probe is located in the Tivoli EIF rules file within Situation Update Forwarder.



## tivoli\_eif.rules

```
ROOT@TORPEDO /opt/IBM/Netcool/omnibus/SitForwarder/omnibus->
ls
checkSUFStatus.sh itm.1.event itm_sync.sql tivoli_eif.rules
controlsync.sh itm.2.event postz.conf writeevent.sh
ereplay.pl itm_db_update.sql postz.minbari.conf
errorevent.conf itm_proc.sql postzmsg
```

If you are running a Tivoli Business Service Manager EIF rule event, Tivoli Business Service Monitor supplies the rules that you require. The `tivoli_eif.rules` are present, as are post z MSG rules and the Tivoli Monitoring update scripts.

## tivoli\_eif.props

```
Inactivity          : 0
Server              : "NCOMS"
Manager             : "Omnibus"
Buffering           : 0
BufferSize          : 10
MessageLevel        : "debug"
MessageLog           : '/opt/IBM/Netcool/omnibus/probes/eif/eif.log'
Help                : 0
Version             : 0
StoreAndForward     : 1
AutoSAF             : 0
RawCapture          : 0
Portnumber          : 9999
RulesFile            : '$OMNIHOME/probes/aix5/tivoli_eif.rules'
EIFCacheFile        : '$OMNIHOME/var/tivoli_eif.cache'
#StreamCapture      : true
# End of file.
MessageLog           : 'stdout'
```

This is the props file. You set the message level to debug to check the NCOMS and OMNIbus logs to see inserted SQL scripts.

## Setting error event flow

### Configuring error event flow to OMNibus (optional)

To send error events to the OMNibus system when errors are detected in the event synchronization process, update the values for the following parameters in the `eventsync_install/omnibus/errorevent.conf` file:

```
ServerName  
ServerPort
```

where:

#### **eventsync\_install**

Is the location where event synchronization program is installed (on Windows® the default install directory is `C:\Program Files\IBM\SitForwarder`; on Linux® and UNIX® operating systems, the default is `/opt/IBM/SitForwarder`).

#### **ServerName**

Is the name of the computer where the EIF probe is running.

#### **ServerPort**

Is the listening port for EIF probe. The default value is 9999.

This is the error event flow page.

## Adding a Tivoli Enterprise Management server (1 of 2)

### Defining additional monitoring servers to the Object Server

To add additional monitoring servers to the list that can receive event status updates from the Netcool/OMNIBus Object Server, issue the **sitconfuser** command as described in the following steps. Ensure event synchronization is configured for both the fully qualified host name and the short host name of the monitoring server.

- On Windows®, change to the %SystemDrive%\Program Files\SitForwarder\bin directory and enter the following command:

```
sitconfuser.cmd add serverid=server userid=user password=password  
pathc=path_to_conf_file type=OMNIBUS
```

Use the sitconfuser command to add an additional Tivoli Enterprise Management Server user or server. You must set a unique user ID and password. The sitconfuser path is displayed.

## Adding a Tivoli Enterprise Management server (2 of 2)

- On UNIX®, change to the `/opt/IBM/SitForwarder/bin` directory and enter the following command:

```
sitconfuser.sh add serverid=server userid=user password=password  
                  pathc=path_to_conf_file type=OMNIBUS
```

where:

**server**

Is the fully qualified host name of the monitoring server.

**user**

Is the user ID used to access the computer where the monitoring server is running.

**password**

Is the password used to access the host computer.

**path\_to\_conf\_file**

Is the directory containing the `situser.conf` file.

Repeat this command to add short host name information for the same monitoring server by specifying the short host name value for the **serverid** parameter.

To add a Tivoli Enterprise Management Server user or server on UNIX, change to the `/opt/IBM/SitForwarder/bin` directory and enter the command provided.

## Starting and stopping the situation update forwarder

### Starting and stopping the Situation Update Forwarder

To send event updates to a monitoring server, you must start the Situation Update Forwarder. This process is started automatically when the event server starts. To start the process manually, change to the `install_esynoh/bin` directory and run the following command:

On Windows®:

```
startSUF.cmd
```

On UNIX®:

```
startSUF.sh
```

To stop the process, run the following command:

On Windows:

```
stopSUF.cmd
```

On UNIX:

```
stopSUF.sh
```

To start and stop the situation update forwarder, enter the commands provided here.

## Summary

In this module, you learned how to:

- Install situation update forwarder
- Send IBM Tivoli Monitoring events to Tivoli Netcool/OMNIBus
- Resynchronize them with IBM Tivoli Monitoring
- Troubleshoot situation update forwarder

In this module, you learned how to install a situation update forwarder. You also learned how to send Tivoli Monitoring events to Tivoli Netcool/OMNIBus, resynchronize them with Tivoli monitoring, and troubleshoot situation update forwarder.

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