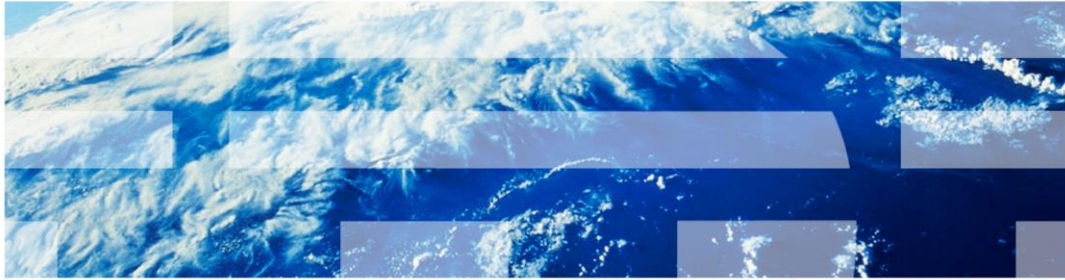


# IBM Tivoli Monitoring V6.2.2

## System p Agents 6.2.2, Configuring and starting agents



© 2013 IBM Corporation

IBM Tivoli® Monitoring V6.2.2, System p® Agents V6.2.2 Interim Feature 2, configuring and starting agents.

## Objectives

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

- Configure a Tivoli Monitoring System p agent to communicate with the Hardware Management Console (HMC) and collect data from the managed systems
- Configure a Tivoli Monitoring System p agent to display data on the Tivoli Enterprise Portal

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

- Configure a Tivoli Monitoring System p agent to communicate with the HMC and collect data from the managed systems
- Configure a Tivoli Monitoring System p agent to display data on the Tivoli Enterprise Portal

## Outline

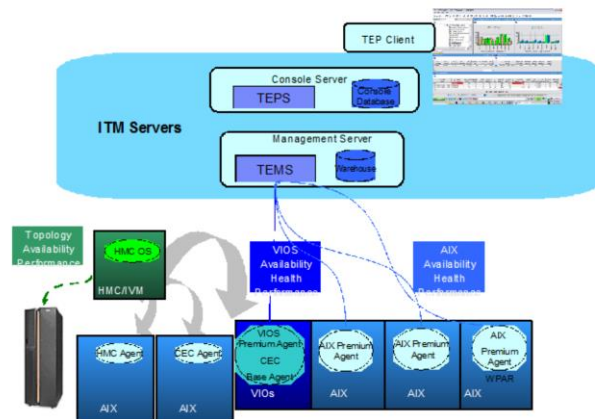
- Tivoli Monitoring System p agent: Processes and communication
- Configuring the agent
- Setting up non-interactive communications with HMC by exchanging SSL keys
- Starting the Tivoli Monitoring System p agents

This module explains the key concepts of the Tivoli Monitoring System p agents, the steps to configure the agents, and the steps to set up the connection with the HMC. Finally, you can find the details on how to start the agents.

## Tivoli Monitoring System p agent: Processes

Tivoli Monitoring System p agents:

- AIX® Premium: Monitors AIX systems
  - kpxagent
  - aixDataProvider-61/53
  - aixDataProvider.pl
- VIOS Premium: Monitors Virtual I/O Server systems
  - kvaagent
  - aixDataProvider-61
  - aixDataProvider.pl
- CEC Base: Monitors systems on a CEC
  - kpkagent
  - cecDataProvider
- HMC Base: Monitors systems that are managed by HMC
  - kphagent
  - hmcDataProvider



4

System p Agents 6.2.2, Configuring and starting agents

© 2013 IBM Corporation

There are four types of Tivoli Monitoring agents for System p: AIX Premium Agent, VIOS Premium Agent, CEC Base Agent, and HMC Base Agent.

The AIX Premium agent is designed to monitor the AIX systems and collect metrics specifically for this operating system. This agent collects different data respect the UNIX® OS agent that gathers only general UNIX metrics.

The VIOS Premium agent collects metrics for a Virtual I/O Server system.

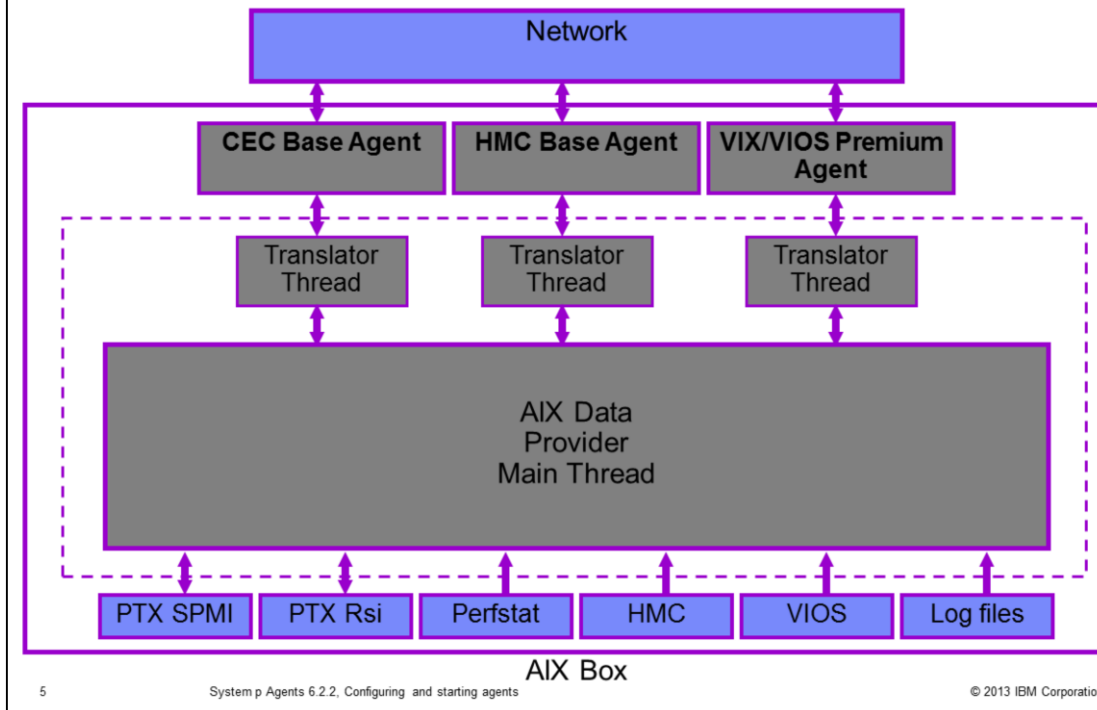
The CEC Base agent collects data for a CEC system and the LPAR that are defined on it.

The HMC Base agent collects data for a Hardware Management Console, and the systems that it manages.

Each of these four agents has its own pair of processes to collect the monitoring data: agent and data provider. The agent process is responsible for the data collection and starts the data provider that helps on this purpose.

At any time, for one agent, only one instance of the agent process and data provider process must be running. The only exception here is the HMC Base agent, which is a multi-instance agent. You have one instance for each HMC you are monitoring.

## Tivoli Monitoring System p agent: Data collection



The Tivoli Monitoring System p agents use several mechanisms to collect data, depending on the attribute group. The most important ones are System Performance Measurement Interface (SPMI) and Remote Statistics Interface (RSI). Another important factor is the communication with the HMC. The VIOS Premium agent, CEC Base agent, and HMC Base agent require this connection to collect data from the managed systems.

## Configuring Tivoli Monitoring System p agents (1 of 2)

- Installation mechanisms:
  - Preinstalled on VIOS:
    - VIOS Premium agent
    - CEC Base agent
  - Manual installation on AIX:
    - AIX Premium agent
    - CEC Base agent
    - HMC Base agent

Before you configure the Tivoli Monitoring System p agents, it is important you are aware that there are two installation mechanisms that depend on the environment.

There are agents that come preinstalled on a VIOS system; they are the VIOS Premium and the CEC Base agents. Alternatively, there are agents that can be installed manually on AIX systems from the Tivoli Monitoring Agents for System p package. They are AIX Premium, CEC Base, and HMC Base agents.

As you can see, the CEC agent is the only agent that can be present on both VIOS and AIX systems.

## Configuring Tivoli Monitoring System p agents (2 of 2)

### Agent configuration

- Preinstalled agents

- VIOS Premium agent:

- ```
$cfgsvc ITM_Premium -attr Restart_On_Reboot=TRUE/FALSE  
hostname=TEMS managing_system=HMC1 second_managing_system=HMC2
```

- CEC Base agent:

- ```
$cfgsvc ITM_cec -attr hostname=TEMS1, mirror=TEMS2,  
Restart_On_Reboot=TRUE/FALSE cec=CEC managing_system=HMC1 OR  
hmcuser@hmc1
```

- Manually installed agents

- ```
itmcmd config -A <XX>
```

- <XX> is the product code of the Tivoli Monitoring System p agent  
(px: AIX Premium / pk: CEC Base / ph: HMC Base)

Each type of installation has its own way to configure agents.

You must configure agents that are preinstalled in the restricted shell of the VIOS. In this example, you must use the **cfgsvc** command. This command generates the public SSL key that is required in the next step.

The agents that are installed manually you must configure with the **itmcmd** command. The syntax is **itmcmd config -A xx**, where **xx** is the product code of the agent that you are configuring.

## Setting up non-interactive communications with HMC by exchanging SSL keys (1 of 2)

- For VIOS Premium, CEC Base and HMC Base agent
- Requirement to collect data from the HMC
- For preinstalled agents, run on the HMC
  - First, step

```
viosvr cmd -m CEC_name -p vios_name -c "cfgsvc -key ITM_cec"
viosvr cmd -m CEC_name -p vios_name -c "cfgsvc -key ITM_premium"
```
  - Second step

```
mkauthkeys --add 'public_key'
```

You must replace '*public\_key*' with the SSL key that you obtained with the **viosvr cmd** command

The VIOS, CEC, and HMC agents must be set up with a Secure Shell connection to obtain data from the HMC. This step is required to allow the agents to collect data from certain attribute groups that are based on HMC data.

For the agents that are preinstalled, the CEC and VIOS agents, you need to log in to the HMC. Then, run the **viosvr cmd** command to obtain the public SSL key. The **cfgsvc** command generates this key. As a second step, you must insert this key in the **mkauthkeys** command. This way, you add this key to the list of stored keys for the HMC user. After you run these commands, the system no longer prompts you for a password when you log in to the HMC from the agent system.



## Setting up non-interactive communications with HMC by exchanging SSL keys (2 of 2)

For manually installed agents, run on the agent system:

- CEC agent: `$CANDLEHOME/aix523/pk/bin/key.pl`
- HMC Agent: `$CANDLEHOME/aix523/ph/bin/key.pl`

```
# ./key.pl
- Enter the name of the primary HMC server: spochmcp5
- Enter the name of the HMC user[hscroot]:
- Setting up credential with spochmcp5.
- Would you like to set a backup HMC server yes/[no]? no
- Would you like to continue setting a default managed system [yes]/no? yes
- Enter or select the managed system:
  1: igstsm
  2: spoc52a
  3: quit
  2
#
```

For the agents that are installed manually, the **key.pl** script is the key step. It does all the required work to exchange the SSL keys between the agent system and the HMC. It needs to be run on the agent system. It prompts you for the primary and secondary HMC server, the HMC user, and the CEC managed system.

## Starting the Tivoli Monitoring System p agents

- On preinstalled agents:
  - `$startsvc ITM_premium` (VIOS agent)
  - `$startsvc ITM_cec` (CEC agent)
- On agents that are installed manually:
  - AIX + CEC agent: `itmcmd agent start <XX>`
  - HMC agent: `itmcmd agent -o <instance> start <XX>`

**<XX>** is the agent product code

**<instance>** is the **HMC instance** that you are monitoring because the HMC agent is the only agent that can monitor multiple instances

You are now ready to start the agents you configured.

For preinstalled agents, you must run the **startsvc** command in the restricted shell.

For the agents that are installed manually, you can use the **itmcmd** command. This command requires the option for the HMC agent. You need to specify the HMC agent instance that you want to configure. No other command options are required.

## Review

- Tivoli Monitoring System p agent: Processes and communication
- Configuring the agent
- Setting up non-interactive communications with HMC by exchanging SSL keys
- Starting the Tivoli Monitoring System p agents

If you want to use the Tivoli Monitoring System p agents, you need to be able to perform the following tasks:

- 1) Understand the processes and how they are collecting data
- 2) Configure the agent in AIX or VIOS environments
- 3) Configure them to collect data from the HMC without prompting for a password, by exchanging SSL keys
- 4) Start the agents

## Summary

Now that you have completed this module, you can perform these tasks:

- Configure a Tivoli Monitoring System p agent to communicate with the HMC and collect data from the managed systems
- Configure a Tivoli Monitoring System p agent to display data on the Tivoli Enterprise Portal

Now that you have completed this module, you can perform these tasks:

- Configure a Tivoli Monitoring System p agent to communicate with the HMC and collect data from the managed systems
- Configure a Tivoli Monitoring System p agent to display data on the Tivoli Enterprise Portal

## Trademarks, disclaimer, and copyright information

IBM, the IBM logo, ibm.com, AIX, System p, and Tivoli are trademarks or registered trademarks of International Business Machines Corp., registered in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies. A current list of other IBM trademarks is available on the web at "[Copyright and trademark information](http://www.ibm.com/legal/copytrade.shtml)" at <http://www.ibm.com/legal/copytrade.shtml>

UNIX is a registered trademark of The Open Group in the United States and other countries.

Other company, product, or service names may be trademarks or service marks of others.

THE INFORMATION CONTAINED IN THIS PRESENTATION IS PROVIDED FOR INFORMATIONAL PURPOSES ONLY. WHILE EFFORTS WERE MADE TO VERIFY THE COMPLETENESS AND ACCURACY OF THE INFORMATION CONTAINED IN THIS PRESENTATION, IT IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED. IN ADDITION, THIS INFORMATION IS BASED ON IBM'S CURRENT PRODUCT PLANS AND STRATEGY, WHICH ARE SUBJECT TO CHANGE BY IBM WITHOUT NOTICE. IBM SHALL NOT BE RESPONSIBLE FOR ANY DAMAGES ARISING OUT OF THE USE OF, OR OTHERWISE RELATED TO, THIS PRESENTATION OR ANY OTHER DOCUMENTATION. NOTHING CONTAINED IN THIS PRESENTATION IS INTENDED TO, NOR SHALL HAVE THE EFFECT OF, CREATING ANY WARRANTIES OR REPRESENTATIONS FROM IBM (OR ITS SUPPLIERS OR LICENSORS), OR ALTERING THE TERMS AND CONDITIONS OF ANY AGREEMENT OR LICENSE GOVERNING THE USE OF IBM PRODUCTS OR SOFTWARE.

© Copyright International Business Machines Corporation 2013. All rights reserved.