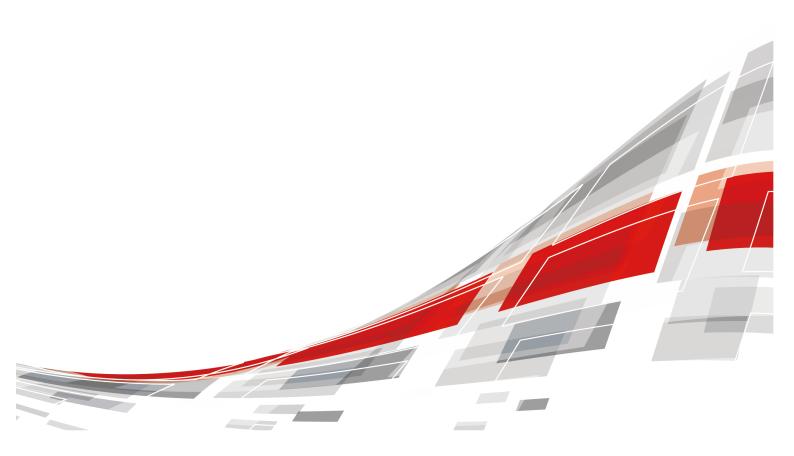
# xFusion Zabbix Template 2.3

# **User Guide**

Issue 02

**Date** 2023-09-30



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### xFusion Digital Technologies Co., Ltd.

Address: 9th Floor, Building 1, Zensun Boya Square, Longzihu Wisdom Island

Zhengdong New District 450046 Zhengzhou, Henan Province People's Republic of China

Website: https://www.xfusion.com

## **About This Document**

### **Purpose**

This document describes the functions and usage of the Zabbix plug-in. The Zabbix plug-in is provided as a Zabbix template. Users can directly use it or use it for secondary development. The Zabbix plug-in can be used to monitor the intelligent Baseboard Management Controller (iBMC), or Hyper Management Module (HMM).

### **Intended Audience**

This document is intended for:

- Technical support engineers
- System maintenance engineers

### **Symbol Conventions**

The symbols that may be found in this document are defined as follows.

Symbol	Description
<b>⚠</b> DANGER	Indicates a hazard with a high level of risk which, if not avoided, will result in death or serious injury.
<b>⚠ WARNING</b>	Indicates a hazard with a medium level of risk which, if not avoided, could result in death or serious injury.
<b>⚠</b> CAUTION	Indicates a hazard with a low level of risk which, if not avoided, could result in minor or moderate injury.
NOTICE	Indicates a potentially hazardous situation which, if not avoided, could result in equipment damage, data loss, performance deterioration, or unanticipated results. if not avoided, could result in equipment damage, data loss, performance deterioration, or unanticipated results.
	NOTICE is used to address practices not related to personal injury.

Symbol	Description
□ NOTE	Supplements the important information in the main text.
	NOTE is used to address information not related to personal injury, equipment damage, and environment deterioration.

## **Change History**

Issue	Date	Description
02	2023-09-30	Added server monitoring function.
		Added communication function with server and supports SNMP V3.
01	2023-03-30	This issue is the first official release.

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# Zabbix Template Introduction

The Zabbix plug-in is provided as a Zabbix template. Users can directly use it or use it for secondary development. The Zabbix plug-in can be used to monitor the iBMC or HMM.

- 1.1 Zabbix Compatibility Information
- 1.2 Zabbix Template Names

## 1.1 Zabbix Compatibility Information

For details about the Zabbix compatibility, see Table 1-1.

**Table 1-1** Compatibility information

Managed Object	Compatible Zabbix Version	Version Dependency	Hardware Compatibility	Interface Protocol
HMM	• Zabbix 5.0	HMM V686D	Blade server:	SNMPv2
	<ul><li>Zabbix 5.4</li></ul>	or later	• E9000	
	• Zabbix 6.0		(MM910)	

Managed	Compatible Zabbix Version	Version	Hardware	Interface
Object		Dependency	Compatibility	Protocol
iBMC	<ul> <li>Zabbix 5.0</li> <li>Zabbix 5.4</li> <li>Zabbix 6.0</li> </ul>	V3/V5 server:iBMC V294 or later V6 server:iBMC V3.03.07.09 or later	Rack server: RH1288 V3 RH2288 V3 RH2288H V3 RH5885 V3 RH8100 V3 T288H V5 Z288H V5 Z288 V5 Z288 V5 Z288H V6 Z288H V6 Z288H V7 Z288H V7 Z288H V7 Z288H V7 Z288H V7 X482H V7 X488H V7 X482H V7 X4620 V3 X4622 V3 X4622 V3 X4628 V3	• SNMPv3

## **1.2 Zabbix Template Names**

### 1.2.1 Template Names (for Zabbix 5.0 only)

- template\_xfusion\_iBMC\_v3v5.xml
- template\_xfusion\_iBMC.xml
- template\_xfusion\_E9000\_HMM.xml

### 1.2.2 Template Names (for Zabbix 5.4 or later)

- template\_xfusion\_iBMC\_v3v5.yaml
- template xfusion iBMC.yaml
- template\_xfusion\_E9000\_HMM.yaml

# 2 Template Functions

### **iBMC** Template

### Monitoring page:

- Latest data tab page: CPU, fan, hard disk, iBMC system information, memory, power supply, RAID controller card, firmware Info, network card, OCP card, PCIe card, BusinessPort, LogicalDrive, and temperature
- Problems and triggers tab page: system health status, CPU status, fan status, power supply status, hard disk status, memory status, OCP card status, PCIe card status, network card status, management network port status, and business port link status
- Graphs tab page: inlet temperature, power consumption, system CPU usage, averagePower, peakPower, presentSystemPower and system memory usage

**Inventory** page: type, name, OS, serial number, tag, and MAC address

### **HMM Template**

#### **Monitoring** page:

- Latest data tab page: CPU, fan, power supply, switch, system information, and temperature
- **Problems and triggers** tab page: system health, chassis health, SMM health, blade status, fan status, power supply status, and switch status
- Graphs tab page: ambient temperature, inlet temperature, LSW temperature, outlet temperature, real-time chassis power, blade CPU power, blade inlet temperature, real-time blade power, and blade system CPU usage

**Inventory** page: type, name, OS, serial number, tag, and MAC address

# 3 Verify the software package

You need obtained software package for the Zabbix plug-in Templates and verified its integrity.

- **Step 1** Obtain software package for the Zabbix plug-in Templates (for example, xFusion\_Zabbix\_Template\_V2.1.tar.gz) and its SHA256 verification file (for example, xFusion\_Zabbix\_Template\_V2.1.sha256.summ) from GitHub.
- **Step 2** Verify the integrity of the Zabbix plug-in Templates software package(on Linux).
  - 1. Go to the directory where the Templates installation package and SHA256 verification file are stored.
  - 2. Run the **sha256sum -c < (grep** software package name sha256 verification file name) command to verify the software package.
    - Example: sha256sum -c <(grep xFusion\_Zabbix\_Template\_V2.1.tar.gz xFusion\_Zabbix\_Template\_V2.1.sha256.sum)
  - Check whether the verification result is OK.
    - If yes, the software package has not been tampered with and can be used.
    - If no, the software package has been tampered with. Obtain a new software package.

----End

# 4 Template Configuration

- 4.1 Configuring the iBMC or HMM
- 4.2 Importing an iBMC or HMM Template
- 4.3 Configuring an HMM or iBMC Template
- 4.4 Adding a Host

### 4.1 Configuring the iBMC or HMM

**◯** NOTE

HMMs support only the SNMPv2 protocol.

- Step 1 Enable SNMPv2/SNMPv3 protocol.
- **Step 2** Configure a community name.

**◯** NOTE

This parameter is required if the SNMP version is set to SNMPv2.

----End

### 4.2 Importing an iBMC or HMM Template

**◯** NOTE

- The imported template is for reference only. You can modify it as required.
- For Zabbix 5.0, use the XML template.
- Step 1 Log in to GitHub and obtain the template\_xfusion\_iBMC\_v3v5.yaml, template\_xfusion\_iBMC.yaml, or template\_xfusion\_E9000\_HMM.yaml template.
- Step 2 Log in to the Zabbix WebUI.
- **Step 3** Choose **Configuration > Templates**. The **Templates** page is displayed.
- Step 4 Click Import. The Import page is displayed.

- **Step 5** Click **Import file** and select the template obtained in **Step 1**.
- Step 6 Click Import.

----End

### 4.3 Configuring an HMM or iBMC Template

### **NOTE**

- The template\_xfusion\_iBMC\_v3v5 corresponds to the server of V5 or previous versions, and the template\_xfusion\_iBMC corresponds to the server of V6 version, please select as required.
- The community name needs to be configured in the template if the SNMP version is set to SNMPv2.
- The community name does not need to be configured if the SNMP version is set to SNMPv3.
- Step 1 Log in to the Zabbix WebUI.
- **Step 2** Choose **Configuration > Templates**. The **Templates** page is displayed.
- **Step 3** Click the name of the iBMC or HMM template that has been imported. The template configuration page is displayed.
- Step 4 Click Macros and set {\$SNMP\_COMMUNITY} and {\$SNMP\_PORT}.
  - The value of {\$SNMP\_COMMUNITY} is the community name configured in 4.1 Configuring the iBMC or HMM.
  - Retain the default value 161 for **{\$SNMP\_PORT}**.

Step 5 Click Update.

----End

### 4.4 Adding a Host

**◯** NOTE

HMMs support only the SNMPv2 protocol.

- **Step 1** Log in to the Zabbix WebUI.
- **Step 2** Choose **Configuration > Hosts**. The **Hosts** page is displayed.
- **Step 3** Click **Create host**. The page for creating a host is displayed.

#### Parameters:

- **Host name**: Enter the host name.
- Groups: Select xFusion Server.
- interfaces:
  - Agent interfaces: Click Remove to remove the existing IP address information. (This is only required for Zabbix 5.0.)
  - SNMP interfaces: Click Add, set the IP address of the iBMC or HMM and retain the default port number 161.

	SNMP version: Select SNMPv2 or SNMPv3 based on the SNMP version enabled on the server.
	□ NOTE
	If the SNMP version is set to <b>SNMPv3</b> , the value of the sub-parameter must be the same as that on the iBMC WebUI of the server. The iBMC supports only the authPriv security level. SHA1, SHA, and SHA128 are of the same encryption algorithm. AES and ASE128 are of the same algorithm.
	<ul> <li>The value of SNMP community is the community name configured in 4.1 Configuring the iBMC or HMM.</li> </ul>
	□ NOTE
	This parameter is mandatory when the SNMP version is set to <b>SNMPv2</b> .  • <b>Enabled</b> : Retain the default value.
	<b>Templates</b> : Click <b>Select</b> . In the upper right corner of the displayed page, select the corresponding group ( <b>xFusion Server</b> ) and select the required template. After the selection is complete, click <b>Add</b> .
	Inventory: Select Automatic.
Step 4	Click Add.
	End

# A Obtaining Technical Support

To obtain assistance, contact technical support as follows:

- Contact customer service center at support@xfusion.com.
- Contact technical support personnel.

# B Communication Matrix

Sour ce Devi ce	So urc e IP Ad dre ss	Sour ce Port Num ber	Desti natio n Devic e	Destina tion IP Addres s	Desti natio n Port Numb er	Prot ocol	Port Descri ption	Destin ation Port Config urable (Yes/N o)	Authenticat ion Mode	Encrypti on Mode
Devi ce to whic h zabb ix belo ngs	IP add res s of the dev ice to whi ch zab bix bel ong s	Ran dom	iBMC	IP address of the device to which iBMC belongs	161	UD P	iBMC SNMP server port is used to obtain SNMP informa tion.	Yes	v1 v2c: Team name v3: Username/ Password Note: using v1 and v2c will reduce security of the system. Exercise caution when performing this operation.	SNMPV3 is subject to iBMC user settings.

Sour ce Devi ce	So urc e IP Ad dre ss	Sour ce Port Num ber	Desti natio n Devic e	Destina tion IP Addres s	Desti natio n Port Numb er	Prot ocol	Port Descri ption	Destin ation Port Config urable (Yes/N o)	Authenticat ion Mode	Encrypti on Mode
iBM C	IP add res s of the dev ice to whi ch iBM C bel ong s	Ran	Devic e to which zabbi x belon gs	IP address of the device to which zabbix belongs	162	UD P	iBMC SNMP Trap receivin g port is used to obtain SNMP Trap informa tion.	Yes	v1 v2c: Team name v3: Username/ Password Note: using v1 and v2c will reduce security of the system. Exercise caution when performing this operation.	None