Uninstalling the iBMA(if the iBMA has been installed)

1. Log in to the server OS as user **root**.
2. Switch to the **/opt/huawei/ibma** directory.
3. Uninstall the iBMA and the driver.

```
[root@localhost]# ./uninstall.sh -a
Starting to uninstall iBMA and driver.
iBMA service is running.
1) Continue
2) Exit
Enter your choice:1
Trying to stop service.
iBMA service stopped successfully.
Uninstall iBMA package.
Delete iBMA directory.
Uninstalling iBMA driver ...
Uninstall iBMA driver successfully.
iBMA uninstalled successfully.
[root@localhost ibma]#
```

Installing the iBMA

Install the iBMA on Linux.

NOTE

- The iBMA supports HTTP and HTTPS. HTTP transmits data in plaintext, which is insecure. HTTPS transmits data in ciphertext, which is secure.
- During the iBMA silent installation, the system selects the protocol to be used by Redfish by querying whether the iBMC supports HTTPS. If the iBMC supports HTTPS, the iBMA uses HTTPS to start the Redfish service. Otherwise, the iBMA uses HTTP to start the Redfish service.
- Only iBMC 3.49 and later versions or 3.01.00.00 and later versions support the query of whether the HTTPS protocol is supported.
- During the running of the iBMA that has run the Redfish service by using HTTPS, if the iBMC is rolled back from a version that supports HTTPS to a version that does not support HTTPS, communication between the iBMA and iBMC will be lost. To restore the communication, set **iBMA_support_https** to **false** in the **iBMA.ini** configuration file and restart the iBMA.
- Uninstall the iBMA before upgrading the OS kernel. After confirming that the target kernel version is compatible with the iBMA, reinstall the iBMA.

Preparations for Installation

This section describes the preparations made for installing the iBMA.

1. Download the iBMA software package.

   Download the latest software package of iBMA 2.0 at Support.

   Download the iBMA driver for RedHat 8.3 at Github.

   NOTE

   The Linux installation package is divided into the following two packages to support different types of servers:

   - iBMA-Linux-pkg-***.zip: installation package for the FusionServer and Atlas servers

- iBMA-Linux-pkg-***-aarch64.zip: installation package for the TaiShan servers

2. Verify software package integrity.

   On the download page, click  to obtain the digital certificate, and click  to download the software. For details about how to obtain the verification tool and method, see Software Digital Signature (OpenPGP) Validation Tool.

3. Enable PCIe devices..
4. Check whether the software installation environment meets the requirements.
5. Enable the port that the iBMA uses to listen HTTP/HTTPS requests (TCP/IPv6/IPv4) on the firewall. The default port number is 8090. The IPv6 protocol is used by default. Ensure the port number 8090 is not used by another program.

NOTE

- If IPv6 addresses are to be used, you need to enable the IPv6 function on virtual NICs.
- If IPv4 addresses are to be used, perform the configuration after the iBMA installation is complete..

6. Check software and hardware compatibility..
7. Upload the iBMA software package to the server. (You can upload the software package by using Xshell or deploying an FTP server.)

NOTE

- It is recommended that at least 2 GB space be reserved on the disk for iBMA installation.
- To delete entered characters when you enter information, press **Ctrl**+**Backspace**.

Installation Overview

This section describes the installation methods and parameters to be set during the installation process.

You can install the iBMA using either of the following methods:

- Silent installation (recommended)

  The silent installation allows software to be installed without user interaction. During the installation process, default settings or parameters specified in a configuration file are used.

- Custom installation

  The custom installation allows users to set parameters as required during the installation process. Table 1-1 lists the parameters to be set during the installation process.

- Forced installation

  The forced installation indicates that the **-f** parameter is added to the custom or silent installation process. During forced installation, the compatibility check will be skipped. The iBMA software installed in this mode may be unstable (if the PCIe device of which the device ID is **0x1710** and vendor ID is **0x19e5** in the running environment is occupied by the driver, the iBMA cannot be successfully installed in forced installation mode). Therefore, this mode is not recommended.

Table 1-1 Parameter configuration

Parameter	Silent Installation	Custom Installation
Redfish service user name	ibma	Indicates the user for running the Redfish service. • 1: ibma user (recommended). • 2: Non-root user of the OS. (Enter the user name as prompted.). • 3: **root** user of the OS.
Redfish service port number	8090	Indicates the port number used by the Redfish service. • 1: Default port 8090 (recommended). • 2: User-defined port, which is an idle port ranging from 1024 to 65535. (Enter the port number as prompted.) **NOTE** This port must also be enabled on the firewall.
Socket service port number	8091	Indicates the port number used by the socket service. • 1: Default port 8091(recommended). • 2: User-defined port, which is an idle port ranging from 1024 to 65535. (Enter the port number as prompted.)
Protocol used by the Redfish service	HTTPS is preferred over HTTP.	Indicates the protocol used by the Redfish service. • 1: HTTP. • 2: HTTPS.
Start the iBMA service immediately after the installation	Yes	Indicates whether to start the iBMA service immediately after the iBMA is installed. • 1: Start immediately (recommended). • 2: Manually start.

Silent Installation

This section describes how to perform a silent installation of the iBMA.

Prerequisites

Conditions

You have uploaded the iBMA installation package, for example **iBMA-Linux-pkg-2.1.5.410.zip**, to a directory on the server.

You have enabled the PCIe device.

Data

No data preparation is required for this operation.

Procedure

Step 1 Log in to the server OS as user **root**.

NOTE

You must install the iBMA as user **root**.

Step 2 Open the directory (the names of all folders in the directory support digits, letters, underscores, hyphens, and dots) in which the installation package is stored, and decompress the package.

```
[root@localhost src]# cd package/
[root@localhost package]# unzip iBMA-Linux-pkg-2.1.5.410.zip
Archive:  iBMA-Linux-pkg-2.1.5.410.zip
 extracting: iBMA-Linux-2.1.5.410.tar.gz
  inflating: iBMA-Linux-2.1.5.410.tar.gz.cms
  inflating: iBMA-Linux-2.1.5.410.tar.gz.crl
  inflating: Open Source Software Notice.doc
  inflating: software.xml
[root@localhost package]# ls
iBMA-Linux-2.1.5.410.tar.gz  iBMA-Linux-2.1.5.410.tar.gz.cms
iBMA-Linux-2.1.5.410.tar.gz.crl  iBMA-Linux-pkg-2.1.5.410.zip  Open
Source Software Notice.doc  software.xml
[root@localhost package]#
```

NOTE

- The CMS and CRL files generated after the ZIP file is decompressed are used for CMS verification on the file package.
- The CMS verification file provided by the iBMA is stored in the **./lib/Linux/upgrade** directory. You can use this tool to verify the downloaded installation package.
- The **software.xml** file describes version information of the installation package.
- The **iBMA-Linux-2.1.5.410.tar.gz** file generated after the decompression is the installation package file.
- **Open Source Software Notice.doc** is a statement of use for open-source software.

Step 3 Decompress the installation package.

```
[root@localhost package]# tar zxf iBMA-Linux-2.1.5.410.tar.gz
[root@localhost package]# ls
iBMA2.0  iBMA-Linux-2.1.5.410.tar.gz  iBMA-Linux-2.1.5.410.tar.gz.cms
iBMA-Linux-2.1.5.410.tar.gz.crl  iBMA-Linux-pkg-2.1.5.410.zip  Open
Source Software Notice.doc  software.xml
[root@localhost package]#
```

Step 4 Switch to the **iBMA2.0** directory and upload the iBMA driver for RedHat 8.3 to the **drivers/RadHat** directory.

```
[root@localhost package]# cd iBMA2.0/
[root@localhost iBMA2.0]#
[root@localhost iBMA2.0]#
[root@localhost iBMA2.0]# ls
```

```
app  config  drivers  install.sh  script
[root@localhost iBMA2.0]# ls ./drivers/RedHat
kmod-iBMA_driver-2.6.32-431.el6.x86_64-0.3.4-rhel6.5.x86_64.rpm
kmod-iBMA_driver-2.6.32-754.el6.x86_64-0.3.4-rhel6.10.x86_64.rpm
kmod-iBMA_driver-3.10.0-693.el7.x86_64-0.3.4-rhel7.4.x86_64.rpm
kmod-iBMA_driver-2.6.32-504.el6.x86_64-0.3.4-rhel6.6.x86_64.rpm
kmod-iBMA_driver-3.10.0-123.el7.x86_64-0.3.4-rhel7.0.x86_64.rpm
kmod-iBMA_driver-3.10.0-862.el7.x86_64-0.3.4-rhel7.5.x86_64.rpm
kmod-iBMA_driver-2.6.32-573.el6.x86_64-0.3.4-rhel6.7.x86_64.rpm
kmod-iBMA_driver-3.10.0-229.el7.x86_64-0.3.4-rhel7.1.x86_64.rpm
kmod-iBMA_driver-3.10.0-957.el7.x86_64-0.3.4-rhel7.6.x86_64.rpm
kmod-iBMA_driver-2.6.32-642.el6.x86_64-0.3.4-rhel6.8.x86_64.rpm
kmod-iBMA_driver-3.10.0-327.el7.x86_64-0.3.4-rhel7.2.x86_64.rpm
kmod-iBMA_driver-4.18.0-80.el8.x86_64-0.3.4-rhel8.0.x86_64.rpm
kmod-iBMA_driver-2.6.32-696.el6.x86_64-0.3.4-rhel6.9.x86_64.rpm
kmod-iBMA_driver-3.10.0-514.el7.x86_64-0.3.4-rhel7.3.x86_64.rpm
kmod-iBMA_driver-4.18.0-240.el8.x86_64-0.3.4-rhel8.3.x86_64.rpm
```

NOTE

install.sh is the iBMA service installation script.

Step 5 Select the installation mode.

```
[root@localhost iBMA2.0]# ./install.sh
-------------------------------------------------------------------
iBMA Installer
 Usage: ./install.sh {-s [options...]|-c|-u|-h} [-f]
 arguments:
  -s  Silent installation mode, recommended
      options:--enable-iBMC_event=true|false
                  Enable/Disable the feature of logging iBMC events
              --enable-iBMA_https=true|false
                  Redfish Server starts with HTTPS/HTTP protocol
                  true indicates that HTTPS is selected
                  false indicates that HTTP is selected
  -c  Custom installation mode
  -f  Force installation mode, used with -s or -c,
      overwrite the configuration files
  -u  Upgrade iBMA, reserve the configuration files
  -h  Show this help
-------------------------------------------------------------------
[root@localhost iBMA2.0]#
```

NOTE

- **./install.sh -s [--enable-iBMC_event=true|false --enable-iBMA_https=true|false]** indicates the silent installation mode (recommended). **--enable-iBMC_event** is used to determine whether to record iBMC events, of which the value is **false** by default. **--enable-iBMA_https** is used to determine whether to start the Redfish service of the iBMA by using HTTPS.
- **./install.sh -c** indicates the custom installation mode.
- **./install.sh -f** indicates the forced installation mode (which needs to be used together with **-s** or **-c** parameters).
- **./install.sh -u** indicates the upgrade installation mode.

Step 6 Perform a silent installation.

```
[root@localhost iBMA2.0]# ./install.sh -s
 -------------------------------------------------------------------
```

```
Starting to install iBMA in silent mode.
System is CentOS
Kernel version is 3.10.0-327.el7.x86_64
Driver package version is 0.3.4
Driver package is already installed.
Installing iBMA ...
-------------------------------------------------------------------
iBMA installed successfully.
-------------------------------------------------------------------
Starting iBMA service.
Start iBMA service successfully.
-------------------------------------------------------------------
Manually enable port 8090 via the veth interface
on the firewall (TCP/IPv6).
[root@localhost iBMA2.0]#
```

NOTE

- If the message "iBMA installed successfully" is displayed, the installation is successful.
- If "failed" is contained in the displayed information, rectify the fault according to.
- After the installation is complete, the iBMA service is automatically started, and the **/etc/init.d/iBMA** or **/usr/lib/systemd/system/iBMA.service** file will be added as the iBMA service management script..

Step 7 Go to the **/opt/huawei/ibma** directory to view the files generated after the installation.

```
[root@localhost iBMA2.0]# cd /opt/huawei/ibma/
[root@localhost ibma]#
[root@localhost ibma]# ls
bin  bob.sh  config  ibmacli  iBMA.sh  lib  lib64  log  script  tools
uninstall.sh [root@localhost ibma]#
```

NOTE

iBMA.sh is the service script and **uninstall.sh** is the uninstallation script.

----End

Custom Installation

This section describes how to perform a custom installation of the iBMA on Linux.

Scenarios

Install the iBMA on a Linux OS, for example CentOS 7.2, in custom mode.

iBMA-Linux-pkg-2.1.5.410.zip is used as an example.

Prerequisites

Conditions

You have uploaded the iBMA installation package, for example **iBMA-Linux-pkg-2.1.5.410.zip**, to a directory on the server.

Data

No data preparation is required for this operation.

Procedure

Step 1 Log in to the server OS as user **root**.

NOTE

You must install the iBMA as user **root**.

Step 2 Open the directory (the names of all folders in the directory support digits, letters, underscores, hyphens, and dots) in which the installation package is stored, and decompress the package.

```
[root@localhost src]# cd package/
 [root@localhost package]# ls
 iBMA-Linux-pkg-2.1.5.410.zip
 [root@localhost package]# unzip iBMA-Linux-pkg-2.1.5.410.zip
 Archive:  iBMA-Linux-pkg-2.1.5.410.zip
 extracting: iBMA-Linux-2.1.5.410.tar.gz
  inflating: iBMA-Linux-2.1.5.410.tar.gz.cms
  inflating: iBMA-Linux-2.1.5.410.tar.gz.crl
  inflating: Open Source Software Notice.doc
  inflating: software.xml
 [root@localhost package]#
```

NOTE

- The CMS and CRL files generated after the ZIP file is decompressed are used for CMS verification on the file package.
- The CMS verification file provided by the iBMA is stored in the **./lib/Linux/upgrade** directory. You can use this tool to verify the downloaded installation package.
- The **software.xml** file describes version information of the installation package.
- The **iBMA-Linux-2.1.5.410.tar.gz** file generated after the decompression is the installation package file.
- **iBMA 2.0 FOSS License Information.doc** is a statement of use for open-source software.

Step 3 Decompress the installation package.

```
[root@localhost package]# tar zxf iBMA-Linux-2.1.5.410.tar.gz
[root@localhost package]#
[root@localhost package]# ls
iBMA2.0  iBMA-Linux-2.1.5.410.tar.gz  iBMA-Linux-2.1.5.410.tar.gz.cms
iBMA-Linux-2.1.5.410.tar.gz.crl  iBMA-Linux-pkg-2.1.5.410.zip  Open
Source Software Notice.doc  software.xml
```

Step 4 Switch to the **iBMA2.0** directory and upload the iBMA driver for RedHat 8.3 to the drivers/RadHat directory.

```
[root@localhost package]# cd iBMA2.0/
[root@localhost iBMA2.0]#
[root@localhost iBMA2.0]#
[root@localhost iBMA2.0]# ls
app  config  drivers  install.sh  script
[root@localhost iBMA2.0]# ls ./drivers/RedHat
```

```
kmod-iBMA_driver-2.6.32-431.el6.x86_64-0.3.4-rhel6.5.x86_64.rpm
kmod-iBMA_driver-2.6.32-754.el6.x86_64-0.3.4-rhel6.10.x86_64.rpm
kmod-iBMA_driver-3.10.0-693.el7.x86_64-0.3.4-rhel7.4.x86_64.rpm
kmod-iBMA_driver-2.6.32-504.el6.x86_64-0.3.4-rhel6.6.x86_64.rpm
kmod-iBMA_driver-3.10.0-123.el7.x86_64-0.3.4-rhel7.0.x86_64.rpm
kmod-iBMA_driver-3.10.0-862.el7.x86_64-0.3.4-rhel7.5.x86_64.rpm
kmod-iBMA_driver-2.6.32-573.el6.x86_64-0.3.4-rhel6.7.x86_64.rpm
kmod-iBMA_driver-3.10.0-229.el7.x86_64-0.3.4-rhel7.1.x86_64.rpm
kmod-iBMA_driver-3.10.0-957.el7.x86_64-0.3.4-rhel7.6.x86_64.rpm
kmod-iBMA_driver-2.6.32-642.el6.x86_64-0.3.4-rhel6.8.x86_64.rpm
kmod-iBMA_driver-3.10.0-327.el7.x86_64-0.3.4-rhel7.2.x86_64.rpm
kmod-iBMA_driver-4.18.0-80.el8.x86_64-0.3.4-rhel8.0.x86_64.rpm
kmod-iBMA_driver-2.6.32-696.el6.x86_64-0.3.4-rhel6.9.x86_64.rpm
kmod-iBMA_driver-3.10.0-514.el7.x86_64-0.3.4-rhel7.3.x86_64.rpm
kmod-iBMA_driver-4.18.0-240.el8.x86_64-0.3.4-rhel8.3.x86_64.rpm
```

NOTE

install.sh is the iBMA service installation script.

Step 5 Select the installation mode.

```
[root@localhost iBMA2.0]# ./install.sh
-------------------------------------------------------------------
iBMA Installer
 Usage: ./install.sh {-s [options...]|-c|-u|-h} [-f]
 arguments:
  -s  Silent installation mode, recommended
      options:--enable-iBMC_event=true|false
                Enable/Disable the feature of logging iBMC events
              --enable-iBMA_https=true|false
                Redfish Server starts with HTTPS/HTTP protocol
                true indicates that HTTPS is selected
                false indicates that HTTP is selected
  -c  Custom installation mode
  -f  Force installation mode, used with -s or -c,
      overwrite the configuration files
  -u  Upgrade iBMA, reserve the configuration files
  -h  Show this help
-------------------------------------------------------------------
[root@localhost iBMA2.0]#
```

NOTE

- **./install.sh -s [--enable-iBMC_event=true|false --enable-iBMA_https=true|false]** indicates the silent installation mode (recommended). **--enable-iBMC_event** is used to determine whether to record iBMC events, of which the value is **false** by default. **--enable-iBMA_https** is used to determine whether to start the Redfish service of the iBMA by using HTTPS.
- **./install.sh -c** indicates the custom installation mode.
- **./install.sh -f** indicates the forced installation mode (which needs to be used together with **-s** or **-c** parameters).
- **./install.sh -u** indicates the upgrade installation mode.

Step 6 Install the iBMA in custom mode.

NOTE

- For details about the parameter settings in STEP 1 to STEP 5 in the following command output, see Table 1-1. STEP 6 indicates whether the parameters are correctly set. If yes, enter **1** to continue the installation. If no, enter **2** to exit the installation. If the installation is required, run the **./install.sh -c** command again.
- During custom installation, if the PCIe device is not enabled, the system automatically attempts to send an **IPMI** command to enable the PCIe device. If the command fails to be sent, you need to manually enable the black box function on the iBMC WebUI, restart the OS, and install the iBMA..

```
[root@localhost iBMA2.0]# ./install.sh -c
------------------------------------------------------------------
Starting to install iBMA in custom mode.
Press Ctrl + C to abort the installation.

System is CentOS
Kernel version is 3.10.0-327.el7.x86_64
Driver package version is 0.3.4
Driver package is already installed.
------------------------------------------------------------------
                STEP 1: Set the Redfish server user
------------------------------------------------------------------
1) Use ibma user (recommended)
2) Enter an existing non-root user
3) Use root user
Enter your choice:1
------------------------------------------------------------------
               STEP 2: Set the Redfish server port
------------------------------------------------------------------
The default port number is <8090>
1) Use the default port number (recommended)
2) Set a port number
Enter your choice:1
------------------------------------------------------------------
               STEP 3: Set the socket server port
------------------------------------------------------------------
The default port number is <8091>
1) Use the default port number (recommended)
2) Set a port number
Enter your choice:1
------------------------------------------------------------------
               STEP 4: Set the Redfish server protocol
------------------------------------------------------------------
1) Use the HTTP protocol
2) Use the HTTPS protocol
Enter your choice:1
------------------------------------------------------------------
               STEP 5: Start iBMA service immediately
------------------------------------------------------------------
iBMA will start after installation
1) Start after installation (recommended)
2) Start iBMA manually
Enter your choice:1
------------------------------------------------------------------
               STEP 6: Confirm settings
------------------------------------------------------------------
Settings summary:
1. Redfish server user: ibma
```

```
2. Redfish server port: 8090
3. Socket server port: 8091
4. Redfish server protocol type: HTTP
5. Start iBMA immediately: Yes

1) Continue to install (recommended)
2) Quit installation process
Enter your choice:1
Installing iBMA ...
-------------------------------------------------------------------
iBMA installed successfully.
-------------------------------------------------------------------
Starting iBMA service.
Start iBMA service successfully.
-------------------------------------------------------------------
Manually enable port 8090 via the veth interface
on the firewall (TCP/IPv6).
[root@localhost iBMA2.0]#
```

NOTE

- If the message "iBMA installed successfully" is displayed, the installation is successful.
- If "failed" is contained in the displayed information, rectify the fault according to.
- After the installation is complete, the **/etc/init.d/iBMA** or **/usr/lib/systemd/system/iBMA.service** file will be added as the iBMA service management script.

Step 7 Go to the **/opt/huawei/ibma** directory to view the files generated after the installation.

```
[root@localhost iBMA2.0]# cd /opt/huawei/ibma/
 [root@localhost ibma]#
 [root@localhost ibma]# ls
 bin  bob.sh  config  ibmacli  iBMA.sh  lib  lib64  log  script  tools
uninstall.sh
 [root@localhost ibma]#
```

NOTE

iBMA.sh is the service script and **uninstall.sh** is the uninstallation script.

----End