MICRO FOCUS

Micro Focus
VisiBroker 8.5 SP6

Release Notes

Contents

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Installing VisiBroker

Before Installing SP6
This release updates VisiBroker 8.5. Before installing this Service Pack you must have VisiBroker 8.5 installed. If you do not have VisiBroker 8.5, you should download it and follow the instructions in the *Installation Guide*.

Installing SP6
To install this release on top of an existing VisiBroker 8.5 installation:

1. Download the release archive to your VBROKERDIR folder.

2. Unpack the archive in the same folder.

3. Restart the application.

Upgrading an earlier installation to JDK 11
VisiBroker 8.5 SP6 supports Java 11 – see New Features. VisiBroker product installers for 8.5 SP5 and older versions could only be used with a Java JDK 8 or below. If your VisiBroker product installation was performed with an installer for 8.5 SP5 or an older version, and you wish to migrate your installation to JDK 11 or higher, there are some additional steps required after the installation described above.

Note: Micro Focus strongly recommends that you create back-ups of all files before making any modifications.

1) Locate all the VisiBroker `.config` files in use by your installation and your applications. The default file names and their locations are:

   ```
   [VBROKERDIR]/bin/toolsjdk.config
   [VBROKERDIR]/bin/vbconsole.config
   [VBROKERDIR]/bin/vbj.config
   [VBROKERDIR]/bin/vbjc.config
   ```

   If you have modified or extended your application's VisiBroker configuration you may also have additional files. Check your start-up scripts for the argument `-VBJconfig`. Note that `.config` files can also include further `.config` files with the `'include'` directive.

2) For each `.config` file:

   a) Locate and update any `'javahome'` directive lines to point to your new JDK 11 location. For example, replace:

      ```
      javahome /usr/lib64/jvm/java-1.8.0
      ```

      with:

      ```
      javahome /usr/lib64/jvm/java-11
      ```

b) Remove any lines that specify the VM property `'vmprop java.endorsed.dirs'`. For example, remove:

```
vmprop java.endorsed.dirs=$var(installRoot)/lib/endorsed
```

This JVM option is no longer supported by JDK 11 and will generate an error if not removed.

c) Remove any directives that reference `.jar` files that are no longer present in the JDK. For example, remove all entries like:

```
addpath $var(JDK_HOME)/lib/tools.jar
addpath $var(JDK_HOME)/jre/lib/rt.jar
```

d) To each `.config` file add entries like those below. These specify the location of CORBA classes that have been removed from the JDK:

```
addendorsejar $var(installRoot)/lib/endorsed/vbjendorse.jar
addomgjar $var(installRoot)/lib/visi-omg.jar
```

If you do not make these additions you may see ClassNotFoundExceptions for classes in the `org.omg.*` packages.

e) Remove any entries using the directives "`addbootjars`" or "`addbootpath`". Such entries do not normally occur in default VisiBroker configurations but you might have added them. As their corresponding JVM options `-Xbootclasspath` and `-Xbootclasspath/p` are no longer supported by JDK 11, using either of these two directives will cause a JVM Loader error.

3) If the JDK 11 you wish to use is 64-bit and VisiBroker was installed with a 32-bit JDK version then apply the appropriate **VisiBroker 64-bit Service Overlay** (see RPI 628816) so that Java services and tools will work with the new JDK.

Platforms and Compilers

For a full list of platforms and compilers supported by VisiBroker 8.5 SP6, see
http://supportline.microfocs.com/prodavail.aspx

New Features

VisiBroker 8.5 SP6 provides enhancements in the following areas.

- OpenSSL
- Java 11 Support
- Configuration Properties

OpenSSL

OpenSSL 1.0.2n continues to be supported. This is the same as for VisiBroker 8.5.5.

Java 11 Support

VisiBroker now supports Java 11.

Note: See Known Issues for some warning messages that may be generated when using Java 11.

Configuration Properties

A new property, `vbroker.orb.enableUTF16Surrogates`, has been added. It manages the use of wide character sequence and wide strings that contain UTF-16 surrogate pair code points. Such code point values fall between '`\uD800`' and '`\uDFFF`'.

If you set this property to `true`, the `wstring` and `sequence<wchar>` types may now contain characters that straddle two adjacent `wchar` (Java `char`) values.

If you wish to retain the ORB's previous behavior, in which `wchar` values in the affected range caused an `org.omg.CORBA.DATA_CONVERSION` exception, leave this property set to the default `false`.

Note: This property was introduced in VisiBroker 8.5 SP5 HF01. Its behavior in that release was different from that described above; the property defaulted to `true`. If you have installed 8.5 SP5 HF01 and implemented this property, you should reconsider its setting.

Deprecated Features

Certicom Security Provider

The Certicom security provider was deprecated at VisiBroker 8.5 SP4. It is currently supported only for backwards compatibility, and Micro Focus recommends that users install the OpenSSL security provider.

IPv4-only Smart Agent

The current default IPv4-only Smart Agent (OSAgent) is deprecated. It will be replaced in a future release by the dual IPv6 and IPv4 communications Smart Agent. This dual Smart Agent is available for VisiBroker 8.5.6 as a separate update. Note that the current IPv4-only Smart Agent is not interoperable with the new dual IPv6/IPv4 Smart Agent. However the current IPv4-only Smart Agent will still be available as a patch in the future.

Unsupported Features

VisiBroker for .NET

VisiBroker for .NET has been discontinued, and references to it have been removed from the product and its documentation.

User Documentation

New documentation released with this Service Pack is available online, from https://www.microfocus.com/support-and-services/documentation/.

Service Pack Archives do not contain the updated documentation, so the documentation accessed from within the product for these versions is the legacy documentation from the VisiBroker 8.5 GA version. Any platforms that have a new installation since 8.5 (such as Windows 10, introduced at 8.5 SP3) will contain the documentation that was current at the time of introduction.

Known Issues

Illegal Reflective Access warning with Java 11

Running VisiBroker applications with Java 11 may emit a warning like:

```
WARNING: An illegal reflective access operation has occurred
```

This issue is benign and will be fixed in a future VisiBroker release. Classes with this known issue are:

```
com.inprise.vbroker.rmi.CORBA.Java2FieldAccess
com.inprise.vbroker.util.TypeDescriptor
```

(RPI 636558, RPI 636559)

Use of deprecated constructors

Compiling generated code from IDL with Java 11 can result in warnings regarding the use of deprecated constructors for the following classes:

```
java.lang.Boolean
java.lang.Integer
java.lang.Long
java.lang.Short
java.lang.Float
java.lang.Double
java.lang.Character
java.lang.Byte
```

This issue is benign and will be fixed in a future VisiBroker release.

(RPI 636582)

Resolved Issues

The resolved issues that customers have reported are listed in this section. The numbers that follow each issue are the Reported Problem Incident number followed by the Customer Incident Numbers (in parentheses). RPIs that have numbers only (and no text) are included to confirm that the RPIs have been fixed, since no further information is required.

Issues resolved in this Service Pack

This section includes issues that are resolved for the first time in this Service Pack.

- Some error messages observed in the VisiNaming log were false alarms. These messages are no longer shown in the log as errors.

  1114795 (3162873)

- The VisiBroker Security example digital certificates are updated to support modern Java JDK implementations.The example now uses the SHA256 signature algorithm instead of MD5 and an increased key size of 2048 bits instead of 1024.

  637092

- Applications dynamically linked to `libvbsec` using the `--as-needed` linker flag would fail to link correctly, resulting in runtime VisiSecure library loading issues.

  This issue has now been resolved by providing a set of class declarations in `$VBROKERDIR/includes/vbsec.h` and the corresponding definitions in `libvbsec`.

  You can switch off this new default linking behavior by defining `VIS_NO_VBSEC_STATIC_INITIALIZE` at compile time.

  On AIX and Microsoft Windows platforms, this has always been the default linker behaviour. Therefore Micro Focus recommends that you do not set the compilation flag `VIS_NO_VBSEC_STATIC_INITIALIZE` on AIX or Windows platforms.

  636210

- `libaxis_client.so` had incorrect library linkage on Linux. This could cause link errors when compiling user applications on some platforms (such as Ubuntu). This has been fixed and these problems will no longer occur.

  636206

- Previous versions of VisiBroker were incompatible with Java 11. These incompatibilities have been fixed and Java 11 is now suported.

  636131

- Corrections have been made to property names and descriptions in the Java and C++ *Developers' Guides*.

  635864

- VisiSecure C++ cipher suite ordering was not aligned with the OpenSSL prioritized list. This could potentially result in selecting a cipher suite other than the optimum for TLS handshake.

  To address this, VisiSecure now constructs the prioritized cipher suite list aligned with OpenSSL at runtime rather than basing it on the numerical cipher suite ID listed in `csstring.h`.
  635835

- The transport protocols SSLv2 and SSLv3 are now regarded as insecure, and have been disabled by default in the VisiSecure C++ client and server ORB configurations.

  You can re-enable SSLv3 if required by setting the properties `vbroker.security.[server|client].socket.enabledProtocols` (either in the property file or as a command-line argument) to a value that allows SSLv3. See the *VisiBroker Security Guide* for full details.

  635171

- Previously installing a 32-bit version of VisiBroker 8.5.*n* required a 32-bit JDK to be installed. A **VisiBroker 64-bit Service Overlay** patch is now available that enables such installations to use a 64-bit JDK. To accomplish this, run the 32-bit VisiBroker installer as normal, but select your 64-bit JDK selected during the

installation process. Immediately after installation unpack the appropriate **VisiBroker 64-bit Service Overlay** patch into the installation directory. Contact Micro Focus SupportLine (http://supportline.microfocus.com/) for further information.

628816 (2851588)

Issues resolved in previous HotFixes

This section includes issues that were fixed in HotFixes to VisiBroker 8.5 SP5 or other versions, and are now incorporated into SP6.

- The VisiBroker Java ORB now permits wide character sequence and wide strings that contain UTF-16 surrogate pair code points, using the new **vbroker.orb.enableUTF16Surrogates** property. See Configuration Properties for the behavior of this property under VisiBroker 8.5 SP5 HF01 and 8.5 SP6.

  1115448 (3169940)

- This update adds support for the following additional anonymous cipher suites (provided from OpenSSL 1.0.2n) which are now available for TLS negotiation with the recent Java versions:

  TLS_DH_anon_WITH_AES_128_CBC_SHA256
  TLS_DH_anon_WITH_AES_256_CBC_SHA256
  TLS_DH_anon_WITH_AES_128_GCM_SHA256
  TLS_DH_anon_WITH_AES_256_GCM_SHA384
  TLS_ECDH_anon_WITH_AES_128_CBC_SHA
  TLS_ECDH_anon_WITH_AES_256_CBC_SHA

  We have also removed DH_anon_WITH_DES_CBC_SHA from the supported list (not supported by OpenSSL 1.0.2n).

  See "Cipher Suites" in the *VisiBroker Security Guide* for more information about cipher suites including how to find a full list of supported ciphers.

  1114810 (3162068)

Updates and SupportLine

Our Web site gives up-to-date details of contact numbers and addresses.

Further Information and Product Support

Additional technical information or advice is available from several sources.

The product support pages contain a considerable amount of additional information, such as:

- The WebSync service, where you can download fixes and documentation updates.
- The Knowledge Base, a large collection of product tips and workarounds.
- Examples and Utilities, including demos and additional product documentation.

To connect, enter https://www.microfocus.com in your browser to go to the Micro Focus home page.

Note: Some information may be available only to customers who have maintenance agreements.

If you obtained this product directly from Micro Focus, contact us as described on the Micro Focus Web site, https://www.microfocus.com. If you obtained the product from another source, such as an authorized distributor, contact them for help first. If they are unable to help, contact us.

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