B2Bi Antivirus Plug-In

Version 1.0.0

November 2019

User Guide

This documentation describes the following Axway software:

B2Bi 2.6

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Note The plug-in is compatible with all the Axway B2Bi versions starting with 2.3.1 SP2 P6.

B2Bi provides a file Antivirus / Malware hookup integration. It is based on ICAP, to avoid dependency on specific AV vendors.

Purpose

The Internet Content Adaptation Protocol (ICAP) Inline Processor allows an administrator to configure ICAP engines to secure B2Bi exchange processes. This provides data loss prevention (DLP) and anti-virus (AV) scans. This option is preferable to the alternative of using non-secure connections and adding SSL coding, typically recommended against because of the negative performance impact.

The ICAP functionality for B2Bi is embedded in an Inline Processor. It can be added to a trading pickup as an attribute and as a message handler processing action.

Configuring the ICAP Inline Processor 2

Initial deployment

After the latest version of B2Bi is installed, and prior to the configuration of ICAP scanning within B2Bi, you must do the following:

Note The folder names may differ depending upon the version of B2Bi that is installed.

1. Locate the `avScanner.properties` file within this directory: `B2Bi_installation\Interchange\samples\icapAv\`
2. Deploy the configuration file (`avScanner.properties`) in this directory: `B2Bi_share\common\conf\avConf`
3. In the case of a B2Bi cluster, repeat this process on all the B2Bi cluster nodes.
4. Deploy the generated `antivirus-processor-1.0.0.jar` file to: `B2Bi_installation\Interchange\jars`
5. In `<B2Bi_installation_directory>\Interchange\conf\log4j2.xml` file, add the following the line: `<Logger name="com.axway.antivirus" level="INFO"/>`

Update the avScanner.properties file

The anti-virus inline processor requires the AV-scanning properties to be configured correctly. The properties are auto-documented in the avScanner.properties file.

Properties include *filters* that specify which files are not to be scanned, based on criteria such as:

- maximum file size
- file extensions and/or file names
- protocols
- partners

maxFileSize

Set the maximum size of the files to be scanned. A large value may impact the scan duration. On the other hand, not scanning large files may impact the security of your systems. For this reason, you may want to use this property together with the `rejectFileOverMaxsize` property described below.

The maximum possible value for this property is MAXINT(2147483647).

rejectFileOverMaxsize

Set this property to `true` to reject messages larger than the value set for `maxFileSize`.

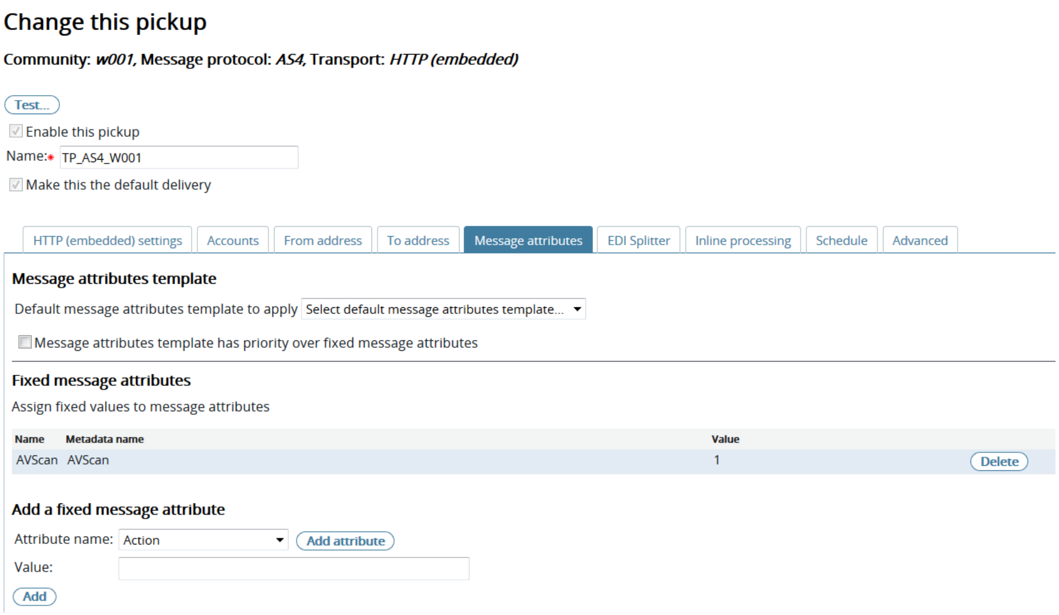
The default value is `false`.

Enable the AV-scanning

The following procedures explain how to enable AV-scanning in a trading pickup as a message attribute and the inline-processor in a Message handler processing action.

Enable the AV-scanning as a message attribute on a trading pickup

1. Open a Trading or Application Pickup exchange definition.
2. Navigate to the **Message attributes** tab.
3. **Add a fixed value to messages** called for instance *AVScan* and set a value
4. **Save** the Trading pickup definition.



Change this pickup

Community: *w001*, Message protocol: *AS4*, Transport: *HTTP (embedded)*

Test...

☑ Enable this pickup

Name:* TP_AS4_W001

☑ Make this the default delivery

Message attributes template

Default message attributes template to apply: Select default message attributes template...

☐ Message attributes template has priority over fixed message attributes

Fixed message attributes

Assign fixed values to message attributes

Name	Metadata name	Value	
AVScan	AVScan	1	Delete

Add a fixed message attribute

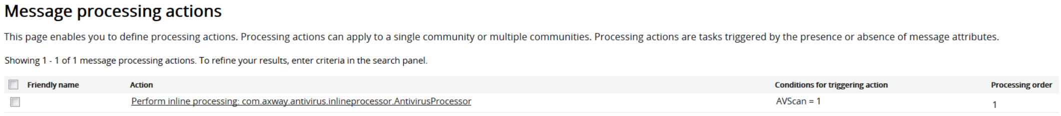
Attribute name: Action | Add attribute

Value:

Add

Enable the AV-scanning in a message handler processing action

1. Navigate to **Manage Trading Configuration**.
2. Select a Community.
3. Select **Processing** from the Community Map.
4. Select **Message handler** from the Processing Map.
5. Select **Manage message processing actions**.
6. Select **Add a new message processing action**.
7. Create the condition that is required for the Message handler processing action to execute. The condition contains the attribute set on the trading pickup and click **Next**.
8. Select as operator **Perform inline processing via a Java class** and use the following value in **Class Name: com.axway.antivirus.inlineprocessor.AntivirusProcessor**
9. Click **Next**.
10. Provide a friendly name and click **Finish**.



Message processing actions

This page enables you to define processing actions. Processing actions can apply to a single community or multiple communities. Processing actions are tasks triggered by the presence or absence of message attributes.

Showing 1 - 1 of 1 message processing actions. To refine your results, enter criteria in the search panel.

☐	Friendly name	Action	Conditions for triggering action	Processing order
☐		Perform inline processing: com.axway.antivirus.inlineprocessor.AntivirusProcessor	AVScan = 1	1

Monitoring the Scan process

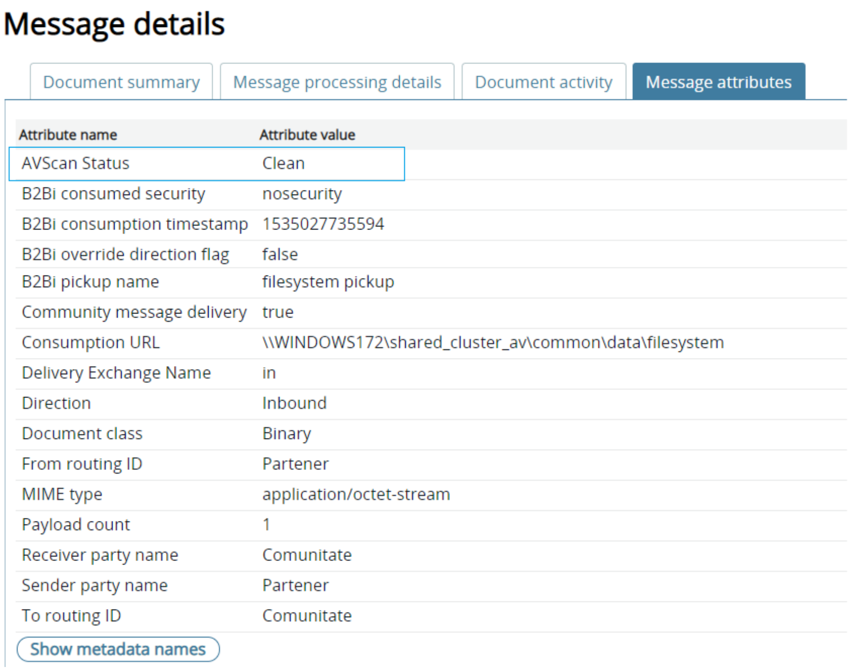
Log file

After enabling the virus scan in your configuration, when a file that matches the criteria is scanned, the following entries appear in the Trading Engine log (TE.log), for example:

```
2018-08-23 06:18:50,726 - INFO  [Thread-1028]
(AntivirusConfigurationWatcher) - Antivirus configuration changed. File
affected: avScanner.properties.
2018-08-23 06:18:50,726 - INFO  [Thread-1028]
(AntivirusConfigurationManager) - Scanner configuration not present or
modified - attempting to load it.
2018-08-23 06:18:50,741 - DEBUG [Thread-1028]
(AntivirusConfigurationHolder) - Scan from integrator value is: false
2018-08-23 06:18:50,741 - DEBUG [Thread-1028]
(AntivirusConfigurationHolder) - Reject file on error value is: true
2018-08-23 06:18:50,741 - DEBUG [Thread-1028]
(AntivirusConfigurationHolder) - Antivirus standard receive length is: 8192
2018-08-23 06:18:50,741 - DEBUG [Thread-1028]
(AntivirusConfigurationHolder) - The ICAP server version is: 1.0
2018-08-23 06:18:50,741 - DEBUG [Thread-1028]
(AntivirusConfigurationHolder) - Antivirus hostname is: cos7-dev-
19.lab.buch.axway.int
2018-08-23 06:18:50,741 - DEBUG [Thread-1028]
(AntivirusConfigurationHolder) - Antivirus port is: 1344
2018-08-23 06:18:50,741 - DEBUG [Thread-1028]
(AntivirusConfigurationHolder) - Antivirus preview size is: 1024
2018-08-23 06:18:50,741 - DEBUG [Thread-1028]
(AntivirusConfigurationHolder) - Antivirus service name is: squidclamav
2018-08-23 06:18:50,741 - DEBUG [Thread-1028]
(AntivirusConfigurationHolder) - Antivirus standard send length is: 8192
2018-08-23 06:18:50,741 - DEBUG [Thread-1028]
(AntivirusConfigurationHolder) - Antivirus connection timeout is: 2000
2018-08-23 06:18:50,741 - DEBUG [Thread-1028]
(AntivirusConfigurationHolder) - Antivirus maximum file size is: 60000000
2018-08-23 06:18:50,741 - INFO  [Thread-1028]
(AntivirusConfigurationManager) - Scanner configuration successfully
loaded.
```

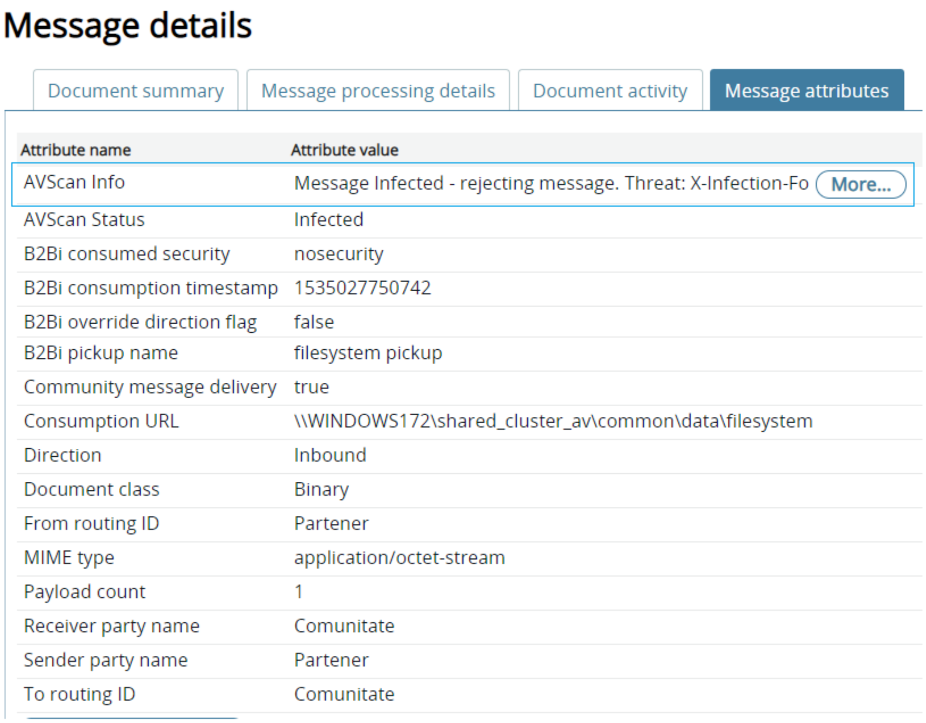
Message tracker

In Message tracker, a metadata attribute is added that indicates the scan status of the message.



Message details

Attribute name	Attribute value
AVScan Status	Clean
B2Bi consumed security	nosecurity
B2Bi consumption timestamp	1535027735594
B2Bi override direction flag	false
B2Bi pickup name	filesystem pickup
Community message delivery	true
Consumption URL	\\WINDOWS172\shared_cluster_av\common\data\filesystem
Delivery Exchange Name	in
Direction	Inbound
Document class	Binary
From routing ID	Partener
MIME type	application/octet-stream
Payload count	1
Receiver party name	Comunitate
Sender party name	Partener
To routing ID	Comunitate

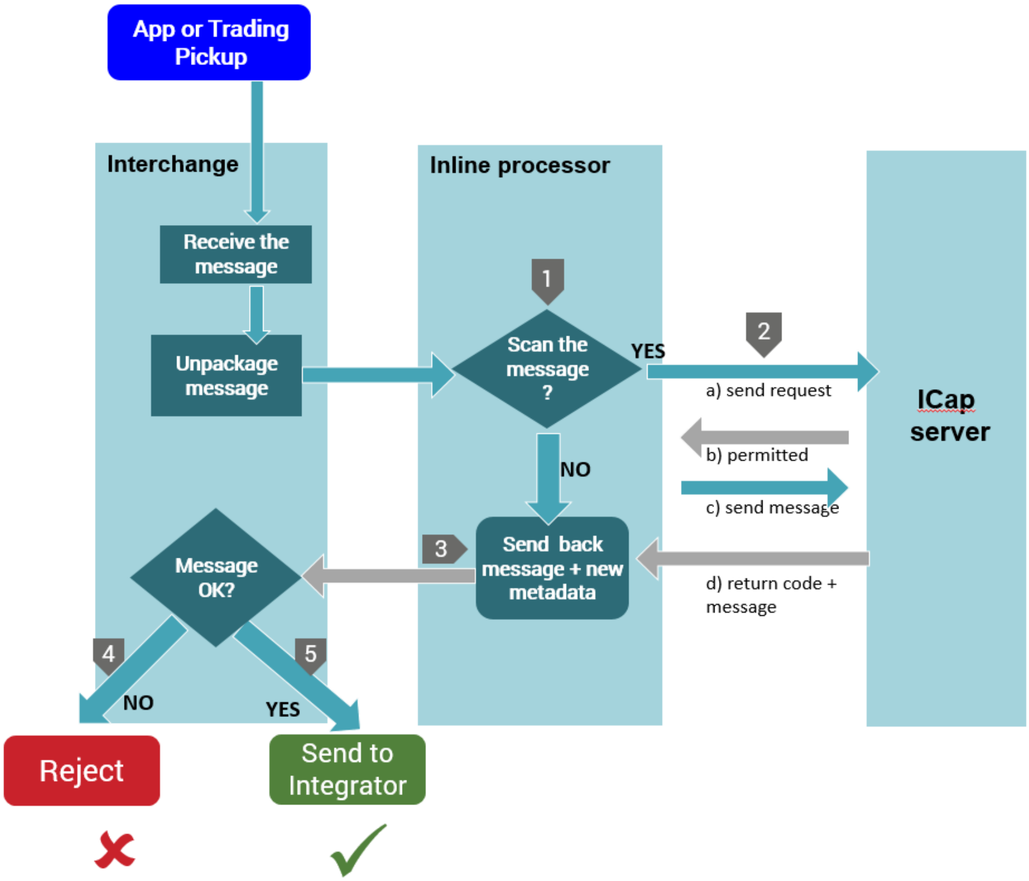


Message details

Attribute name	Attribute value
AVScan Info	Message Infected - rejecting message. Threat: X-Infection-Fo
AVScan Status	Infected
B2Bi consumed security	nosecurity
B2Bi consumption timestamp	1535027750742
B2Bi override direction flag	false
B2Bi pickup name	filesystem pickup
Community message delivery	true
Consumption URL	\\WINDOWS172\shared_cluster_av\common\data\filesystem
Direction	Inbound
Document class	Binary
From routing ID	Partener
MIME type	application/octet-stream
Payload count	1
Receiver party name	Comunitate
Sender party name	Partener
To routing ID	Comunitate

How the scanning process works 3

The following diagram illustrates the ICAP file scanning process when the scanning option is activated:



1. If the message received from Interchange has restrictions defined in the `avScanner.properties` file, the Inline processor decides whether to scan the message.
2. If the message is to be scanned, the dialog between the Inline processor and the ICAP server is as follows:
    a. The Inline processor sends the OPTIONS request to connect to the ICAP server.

   b. The ICAP server indicates which type of request are permitted and returns the maximum size of the preview the server can use.
   c. The Inline processor sends the message in chunks.
   d. The ICAP server sends a code and a message.
3. The inline processor sends the message with the new metadata back to Interchange - “AVScanStatus”- “AVScanInfo”
4. The message is rejected if it is Infected or if an ERROR occurred.
5. The message is sent to Integrator for processing.

Notes and limitations

- If the backup option is activated, and the files are infected, a backup of the file is saved on the system.
- If the backup option is disabled, the files are deleted directly.
- The payload of the infected files cannot be viewed or downloaded from Message tracker.
- If a message has more than one attachments, and these are infected:
    - The infected attachment is not sent to processing.
    - In the original message, the link for the failed attachment is still available.