PEtALS-BC-Filetransfer

This document explain how to install configure and use the petals-bc-filetransfer JBI component.

PEtALS Team

Marie Sauvage <marie.sauvage@ebmwebsourcing.com>

- June 2007 -

Table of Contents

List of Figures

List of Tables

PEtALS-BC-FILETRANSFER

The FileTransfer component is a Binding Component (BC) which supports file transfers. It is based on the PEtALS CDK 3.0.

This component permits to :

- Poll a configured directory for incoming files. At each poll, each file retrieved is put into a new JBI message, placed as source or attachment. The resulted message exchange is sent to a targeted JBI endpoint.

- Write outcoming JBI message content and attachements into targeted files.

Chapter 1. Component Configuration

The following attributes can be set during the installation phase to configure the component, using the params element of the `jbi-install-component` ANT task:

There are no File Transfer specific configuration values.

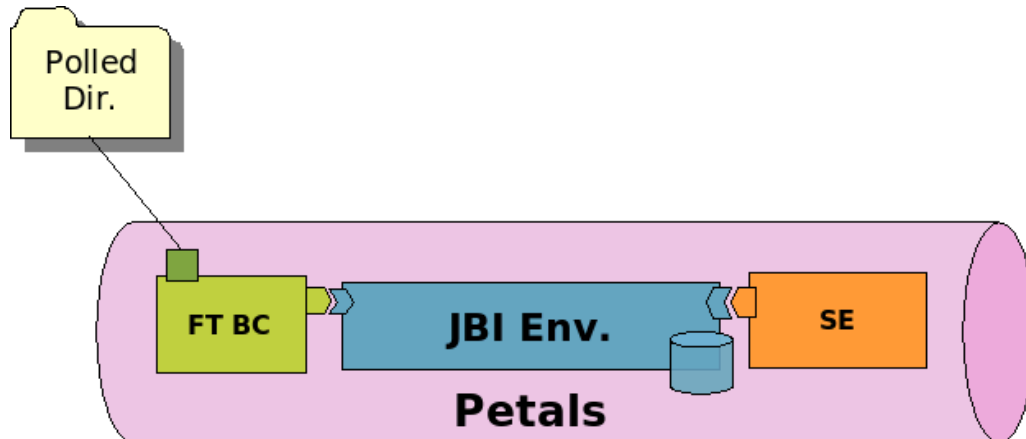**Table 1.1. Advanced configuration of the component**

Parameter	Description	Default	Required
pool-size	Number of threads listening to messages coming from the JBI container (JBIListeners). Int number >= 1	0	No
ignored-status	Status of messages exchanges that component must ignore. Accepted values : **DONE_AND_ERROR_IGNORED**, **DONE_IGNORED**, **ERROR_IGNORED** or **NOTHING_IGNORED**	DONE_AND_ERROR_IGNORED	No
jbi-listener-class-name	Fully qualified name of the class extending **AbstractJBIListener**		Yes
external-listener-class-name	Fully qualified name of the class extending **AbstractExternalListener**		No
properties-file	Name of the file containing values of keys used as reference by other parameters. To be able to configure a service-unit, you will use a key that has its value hosted by the component (ie. CDK documentation). The value of this parameter is : • whether an URL, • or a file relative to the directory defined by the environment variable PETALS_HOME.		No

Chapter 2. Service Configuration

2.1. Transfer files into the JBI bus

CONSUME SERVICE : Transfer file(s) to a JBI service

Figure 2.1. Consumes a JBI service on polled file(s)

2.1.1. Service Unit descriptor

```xml
<?xml version="1.0" encoding="UTF-8"?>
<jbi:jbi xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns:petals="http://petals.ow2.org/extensions"
    xmlns:jbi="http://java.sun.com/xml/ns/jbi"
    xmlns:company="http://company.com"
    version="1.0">
<jbi:services binding-component="true">
  <jbi:consumes interface-name="company:Interface"
   service-name="company:TransformFile"
   endpoint-name="Endpoint">
   <petals:mep>InOnly</petals:mep>
   <petals:operation>process</petals:operation>
   <petals:params>
    <petals:param name="filetransfer.working-directory">/home/petals</petals:param>
    <petals:param name="filetransfer.polling-period">3000</petals:param>
   </petals:params>
  </jbi:consumes>
 </jbi:services>
</jbi>
```

Table 2.1. Service-unit attributes to consume services

Attribute	Description	Default Value	Required
consumes	Name of the JBI service that will be called into the JBI environment. Only the interface (Qname) name can be provided (the container will choose a ServiceEndpoint for this interface), or you can only set service (qname) and endpoint (string) names, without the interface name.		Yes
filetransfer.working-directory	Address of the polled directory. It is recommended to create absolute address. Environment variables are supported with the form `${my_env}`		Yes
filetransfer.polling-period	The period to poll for new files in ms.	1000	No
filetransfer.waste-directory	The directory where to put the files once the file transfer has been processed.		No
filetransfer.exchange-data	Send the file(s) as JBI attachament and/or put the file content as JBI message payload. Possible values are `source`, `attachment`, `both`.	both	No

Table 2.2. Advanced configuration of Service Unit (consumes elements)

Parameter	Description	Default	Required
mep	Message exchange pattern abbreviation. This parameter can be user in conjunction with a method of the CDK Listeners : **createMessageExchange(Extensions extensions)**. This method returns a CDK Exchange corresponding to the type of the specified pattern. Admitted values are : **InOnly**, **RobustInOnly**, **InOptionalOut** et **InOut**		Yes
operation	Operation to call on a service. This parameter can be used in conjuntcion with the sendXXX methods of the Listeners. If no operation is specified in the MessageExchange to send, this parameter will be used.		Yes
timeout	Timeout in milliseconds in a synchronous send. this parameter can be used in conjunction with the **sendSync(Exchange exchange)** method of the Listeners. With this, a synchronous send is done with this timeout value. 0 for no timeout int number > 0 for a timeout	0	No
org.ow2.petals.rout...	**To be used only in platform (distributed) PEtALS distribution**. Two kind of strategy can be defines: highest or random. The others parameters represents respectively the local ponderation, the ponderation of the remote active endpoint and the ponderation of the remote inactive endpoint. The 'random' strategy chooses an endpoint in function of defined ponderations. The endpoints that have the strongest ponderation can be more easely choose in comparison with the others. The 'highest' strategy chooses the first endpoint in the list that have the strongest ponderation.		No
org.ow2.petals.tran...	**To be used only in platform (distributed) PEtALS distribution**. When large and redondant information is contained in the payload of a MessageExchange, it can be interestting to compress the payload to reduce the volume of data to transfer between two PEtALS nodes. Values are `true` or `false`. True activated the compression of the messages payload.	false	No
org.ow2.petals.mes...	All JBI exchanges end by a message containing a `DONE` or `ERROR` status. The consumer must accept those messages, otherwise they are accumulated in the NMR. With this parameter , they can be ignored to reduce the PEtALS bus traffic. Possible values are `true` or `false`. Setting a true value makes the PEtALS container ignoring acknowlegment messages addressed to the deployed SU. **This feature is unactivated when using synhronous sends.**		No
org.ow2.petals.tran...	**To be used only in platform (distributed) PEtALS distribution**. This property set up the policy of the Quality of Service supported by Petals Transporter. Possible values are : reliable, fast. If not specified, the reliable policy is selected by default.		No

2.1.2. Consumer restrictions

The FileTransfer component supports only InOnly message exchange pattern as consumer.

The FileTransfer component doesnt support synchronous sendings as consumer.

2.1.3. Consumer usage

If you want to invoke a service exposed in the JBI bus with files, put the files in the configured directory (`filetransfer.working-directory`). At each configured polling period (`filetransfer.polling-period`), the component fetch the incoming files.

For each received files and according to the exchange mode (`filetransfer.exchange-data`), the component creates a new message exchange and attach the file, either as source or as attachment of the ingoing message exchange.

If a file is put as a attachment, the name of the attachment is set to the name of the file, and in the source of the message exchange , the component put a XML structure like following:

```
<attached-files>
 <file-name>myFileName</file-name>
<attached-files>
```

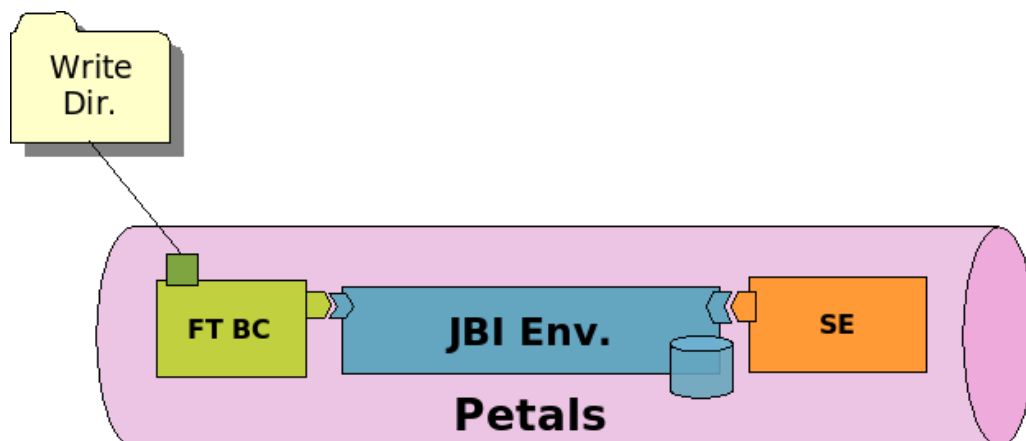The resulted message exchange(s) are sent to the targeted endpoint.

if the waste directory (`filetransfer.waste-directory`) is set, the transfered file is moved into it. Otherwise the file is deleted.

When deploying a service unit like in the previous code snippet, all the files put in the directory `/home/petals` would be transformed to invokation to the `Transformfile` service.

2.2. Receiving files

PROVIDE SERVICE : Write JBI messages content and attachments to directory

Figure 2.2. Provides a JBI service to write JBI messages into directory

2.2.1. Service Unit descriptor

```
<?xml version="1.0" encoding="UTF-8"?>
<jbi:jbi xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns:petals="http://petals.ow2.org/extensions"
    xmlns:jbi="http://java.sun.com/xml/ns/jbi"
```

```
    xmlns:company="http://company.com"
    version="1.0">
 <jbi:services binding-component="true">
  <jbi:provides interface-name="company:Interface"
   service-name="company:Transferfile"
   endpoint-name="Endpoint">
   <petals:params>
    <petals:param name="filetransfer.working-directory">/company/temp</petals:param>
    <petals:param name="filetransfer.exchange-data">both</petals:param>
    <petals:param name="filetransfer.file-name">petals.txt</petals:param>
   </petals:params>

 </jbi:provides>
 </jbi:services>
</jbi:jbi>
```

Table 2.3. Service-unit attributes to provide services

Attribute	Description	Default Value	Required
provides	Name of the JBI service that will be activated to expose the File Transfer endpoint into the JBI environment. interface (qname), service (qname) and endpoint (string) name are required.		Yes
filetransfer.working-directory	The name of the local host directory to write incoming JBI message to. It is recommended to specify absolute address. The directory will be created if it do not exist.	The component workspace directory	No
filetransfer.exchange-data	Transfer either the source, the attachments or both of the received message exchanges. Possible values are both, attachment or source.		Yes
filetransfer.file-name	The name of the file where the JBI message source will be written in. The file name will be the JBI operation value if operation found, else it will be the default name content.xml. The system date (in ms since 1970) will be appended on each created file. .	content.xml	No

Table 2.4. Advanced configuration of Service Unit (provides elements)

Parameter	Description	Default	Required
wsdl	Path to the wsdl file describing services and operations offered by the provided JBI endpoints defined in the SU. The path can be a url "http" or "file" or relative to the root directory of the SU archive. Ex : "file:///user/ofabre/test.wsdl" or "/WSDL/test.wsdl" If no wsdl path is specified, a simplified description will automaticaly be written by the CDK.		No
org.ow2.petals.messaging.provider.mode	All JBI exchanges end by a message containing a DONE or ERROR status. The consumer must accept those messages, otherwise they are accumulated in the NMR. With this parameter , they can be ignored to reduce the PEtALS bus traffic. Possible values are true or false. Setting a true value makes the PEtALS container ignoring acknowlegment messages addressed to the deployed SU. **This feature is unactivated when using synhronous sends.**	No	

2.2.2. Consumer restrictions

The FileTransfer component supports only InOnly message exchange pattern as service provider.

2.2.3. Consumer Usage

According to the configured mode (`filetransfer.exchange-data`), the normalized message exchanges ingoing content (source), attachments or both are transfered to the target directory (`filetransfer.working-directory`).

If the component transfers a source, the name of the created file would bet either the operation of the message exchange, the configured name (`filetransfer.file-name`) or the default name `content.xml`.

If the component transfers attachments of a message exchange, the name of the created files would be the names of the attachments.

For each file created, the system date is appended to the file name.

When deploying a service unit like in the previous code snippet, all the JBI messages received on the `Transferfile` service will produce files in the `/company/temp` directory.