



Boundless Integrations

The Boundless Integrations ZIP Service replaces the IBM Sterling B2B Integrator Compression Service. The functionality it provides will handle all use cases of the service it replaces.

Prerequisites:

- Install 3rd Party Vendor JAR: zip4j_1.3.2.jar. Available free under the Apache License, Version 2.0 (<http://www.lingala.net/zip4j/download.php>)
- Install 3rd Party Vendor JAR: boundless_integrations_core.jar. Available free with first Boundless Integrations license
- BoundlessIntegrations.properties.in: Available with any Boundless Integrations license (reminder: run setupfiles(.sh or .cmd) after placing in the properties directory of each node)
- Make note of any hot fixes currently installed and make sure to have a copy of the jar file available

Installation:

- Download ZIP_1020402.0.0.jar: After purchasing the ZIP Service license, the jar file will be available for download
- Generate, download, and place BoundlessIntegrations.properties_zip_ext.in file into the properties directory of each node
- Stop B2Bi Node(s)
- Place in a location accessible to each node and run bin/installService(.sh or .cmd)
- Reapply latest hot fix (as installing new services will remove any hot fixes)
- If on a cluster environment, perform the previous two steps on all nodes before running bin/startCluster # (where # is the node number) starting with Node 1.
- Check properties/lang/en directory for ZIP_en.properties file. If not present, download and copy to that directory. If other languages are available, you may do the same copy to the appropriate language directory for the appropriate language properties file.
- Start B2Bi Node(s)
- Configure at least one ZIP Service within B2Bi (see below)

License Update:

- If manually paying for the next year's maintenance, do so.
- After payment has been received (whether automatic or manual), generate, download, and place BoundlessIntegrations.properties_zip_ext.in file into the properties directory of each node.
- Run bin/setupfile(.sh or .cmd).
- On each node bounce B2Bi or execute BNDINT_RefreshCache Business Process.

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Configure ZIP Service:

- Select Default Mode:
 - Zip: Compress one or more documents into a single archive file
 - Unzip: Uncompress one or more documents into current process
 - Bootstrap: Uncompress one or more documents and start a new process
 - List: Return list of document names in a single archive file
 - Append: Add one or more documents to and existing archive file
 - Remove: Delete one or more documents from an existing archive file
- Select ZIP File Type:
 - ZIP: Handles PKZIP and AES-encrypted archive files
 - GZ: Handles GZip compressed files (no archiving)
 - TAR: Handles TAR archive files (no compression)

Workflow Parameters:

- mode:
 - Zip: Compress one or more documents into a single archive file
 - Unzip: Uncompress one or more documents into current process
 - Bootstrap: Uncompress one or more documents and start a new process
 - List: Return list of document names in a single archive file
 - Append: Add one or more documents to and existing archive file
 - Remove: Delete one or more documents from an existing archive file
- type:
 - ZIP: Handles PKZIP and AES-encrypted archive files
 - GZ: Handles GZip compressed files (no archiving)
 - TAR: Handles TAR archive files (no compression)
- compressMode:
 - Store: Do not compress documents
 - Deflate: Compress documents
- deflateLevel:
 - 0-9: Deflation level (if compressing documents)
- encryption:
 - None: Do not encrypt
 - Standard: Standard PK encryption algorithm
 - AES: AES encryption algorithm
- aesStrength:
 - 128: 128-bit encryption when using AES encryption
 - 256: 256-bit encryption when using AES encryption
- BootstrapBP:
 - Name of business process to start for each document
- delayMS:
 - Time in milliseconds to sleep between documents



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- loadBalance:
 - Unbalanced: Do not manually load balance (B2Bi might)
 - Parent WF: Use execution settings of parent process
 - Child WF: Use execution settings of process to start
 - Execution Role: Use one or more execution roles (comma-delimited)
 - Node: Use one or more nodes (comma-delimited)
- balanceValue:
 - For Execution Role and Node options, the list of values
- userToken:
 - User account to use when executing child process
- DocumentId#:
 - One DocumentId node for each document being archived (i.e. DocumentId1, DocumentId2, etc.) based on the Document ID
- DocumentKey#:
 - One DocumentKey node for each document being archived (i.e. DocumentKey1, DocumentKey2, etc.) based on the node name passed to the service.
- PrimaryDocument:
 - Archive document to extract from
- password:
 - Password used to encryption (if decrypting, encrypting, or both)
- filenameFilter:
 - Filter to use when selecting files (i.e. *data?.xml where ? represents any single character and * represents any string of characters)
- Zip Mode Parameters (ZIP, GZ, and TAR types):
 - compressMode (ZIP)
 - deflateLevel (ZIP)
 - encryption (ZIP)
 - aesStrength (ZIP)
 - DocumentId# (ZIP, TAR)
 - DocumentKey# (ZIP, TAR)
 - Password (ZIP)
- Unzip Mode Parameters (ZIP, GZ, and TAR types):
 - PrimaryDocument (ZIP, GZ, TAR)
 - Password (ZIP)
 - filenameFilter (ZIP, GZ, TAR)

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- Bootstrap Mode Parameters (ZIP, GZ, and TAR types):
 - PrimaryDocument (ZIP, GZ, TAR)
 - Password (ZIP)
 - filenameFilter (ZIP, GZ, TAR)
 - BootstrapBP (ZIP, GZ, TAR)
 - delayMS (ZIP, GZ, TAR)
 - loadBalance (ZIP, GZ, TAR)
 - balanceValue (ZIP, GZ, TAR)
 - userToken (ZIP, GZ, TAR)

- List Mode Parameters (ZIP and TAR types):
 - PrimaryDocument (ZIP, TAR)
 - Password (ZIP)
 - filenameFilter (ZIP, TAR)

- Append Mode Parameters (ZIP and TAR types):
 - PrimaryDocument (ZIP, TAR)
 - password (ZIP)
 - compressMode (ZIP – for updated archive file)
 - deflateLevel (ZIP)
 - Encryption (ZIP – for updated archive file)
 - aesStrength (ZIP)
 - DocumentId# (ZIP, TAR)
 - DocumentKey# (ZIP, TAR)

- Remove Mode Parameters (ZIP and TAR types):
 - PrimaryDocument
 - password (ZIP)
 - filenameFilter (ZIP, TAR)
 - compressMode (ZIP – for updated archive file)
 - deflateLevel (ZIP)
 - Encryption (ZIP – for updated archive file)
 - aesStrength (ZIP)

NOTE: If DocumentId# and DocumentKey# are not provided, then all documents in ProcessData are obtained. For Append Mode, Primary Document (which is the archive file being updated) is not included in the list of documents to be appended.



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Examples:

Zip mode, not encrypted (no password), and deflated to level 9 (default settings):

```
<operation name="ZIP Service">
  <participant name="ZIPService"/>
  <output message="outmsg">
    <assign to="mode">Zip</assign>
    <assign to="DocumentId1">3492881484896afbanode1</assign>
    <assign to="DocumentId2">84318514848971a8dnode1</assign>
    <assign to="." from="*"></assign>
  </output>
  <input message="inmsg">
    <assign to="." from="*"></assign>
  </input>
</operation>
```

Zip mode, 256-bit AES encrypted, and stored:

```
<operation name="ZIP Service">
  <participant name="ZIPService"/>
  <output message="outmsg">
    <assign to="mode">Zip</assign>
    <assign to="DocumentKey1">headerXMLDoc</assign>
    <assign to="DocumentKey2">detailXMLDoc</assign>
    <assign to="compressMode">Store</assign>
    <assign to="encryption">AES</assign>
    <assign to="aesStrength">256</assign>
    <assign to="password">p@ssw0rd</assign>
    <assign to="." from="*"></assign>
  </output>
  <input message="inmsg">
    <assign to="." from="*"></assign>
  </input>
</operation>
```

In both examples, PrimaryDocument is updated to be the archive file. The two DocumentKey values are pointers to the documents by node name in /ProcessData.

Append mode is similar to the above examples, except PrimaryDocument needs to be the original archive file and all DocumentId/DocumentKey nodes are appended to it to create a new archive file. The password is required if the original archive file is password protected.



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Unzip mode, only "xml" files, where PrimaryDocument is the archive file:

```
<operation name="ZIP Service">
  <participant name="ZIPService"/>
  <output message="outmsg">
    <assign to="mode">Unzip</assign>
    <assign to="filenameFilter">*.xml</assign>
    <assign to="password">p@ssw0rd</assign>
    <assign to="." from="*"></assign>
  </output>
  <input message="inmsg">
    <assign to="." from="*"></assign>
  </input>
</operation>
```

NOTE: Password is only needed if the archive file is password protected.

Example ProcessData result (PrimaryDocument is the original archive file):

```
<ProcessData>
  <PrimaryDocument @SCIOBJECTID="953123147789bca8dnode2" />
  <UnzipFile1 @SCIOBJECTID="32115bb4aa5f78356node2" />
  <UnzipFile2 @SCIOBJECTID="d45fc468dbffd64a1node2" />
  <UnzipFile3 @SCIOBJECTID="e1436e018ef1c3d4enode2" />
  <UnzipFile4 @SCIOBJECTID="ff1a442a6c245c7a1node2" />
</ProcessData>
```

Remove mode is similar except only PrimaryDocument is returned and it is the updated archive file without the files specified by filenameFilter.

List mode, only "xml" files, where PrimaryDocument is the archive file:

```
<operation name="ZIP Service">
  <participant name="ZIPService"/>
  <output message="outmsg">
    <assign to="mode">List</assign>
    <assign to="filenameFilter">*.xml</assign>
    <assign to="password">p@ssw0rd</assign>
    <assign to="." from="*"></assign>
  </output>
  <input message="inmsg">
    <assign to="." from="*"></assign>
  </input>
</operation>
```



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NOTE: Password is only needed if the archive file is password protected.

Example ProcessData result (PrimaryDocument is the original archive file):

```
<ProcessData>
  <PrimaryDocument @SCIOBJECTID="953123147789bca8dnode2" />
  <ZipList>
    <File>contents.xml</File>
    <File>chapter1.xml</File>
    <File>chapter2.xml</File>
    <File>index.xml</File>
  </ZipList>
</ProcessData>
```

Bootstrap mode, no delay, unbalanced (default settings)

```
<operation name="ZIP Service">
  <participant name="ZIPService"/>
  <output message="outmsg">
    <assign to="mode">Bootstrap</assign>
    <assign to="filenameFilter">*.xml</assign>
    <assign to="password">p@ssw0rd</assign>
    <assign to="BootstrapBP">XML_File_Router</assign>
    <assign to="." from="*"></assign>
  </output>
  <input message="inmsg">
    <assign to="." from="*"></assign>
  </input>
</operation>
```

Bootstrap mode, 5 second delay, with load balance on Node1 and Node2

```
<operation name="ZIP Service">
  <participant name="ZIPService"/>
  <output message="outmsg">
    <assign to="mode">Bootstrap</assign>
    <assign to="filenameFilter">*.xml</assign>
    <assign to="BootstrapBP">XML_File_Router</assign>
    <assign to="delayMS">5000</assign>
    <assign to="loadBalance">Node</assign>
    <assign to="balanceValue">node1,node2</assign>
    <assign to="." from="*"></assign>
  </output>
  <input message="inmsg">
    <assign to="." from="*"></assign>
  </input>
</operation>
```



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In all cases, a new process is started (and message_to_child is passed along with the document as PrimaryDocument).

Troubleshooting:

- ZIP service throws an exception.
 - Check system.log for details. Open an incident with Boundless Integrations if needed.
- No PrimaryDocument is returned.
 - Check workflow to ensure a PrimaryDocument was passed to the service or that at least one valid DocumentId node exists for Zip mode.
 - Check system.log to see if the license is invalid. If not, see License Update session to get a valid license. NOTE: If your maintenance is up to date, you can regenerate a valid license file for the entire 13 month period.
- No documents in Unzip mode, document names in List mode, or processes in Bootstrap mode are generated.
 - Check filenameFilter setting against the contents of the actual archive file. The filenameFilter might be filtering out all documents.
- Bootstrap is not load balancing.
 - Ensure all desired nodes are available at the time the workflow was running. An inactive node is not considered for load balancing and will be excluded automatically. If all requested nodes for load balancing are inactive (including all nodes in an execution role), the ZIP service reverts to unbalanced mode.

Support:

Contact Boundless Integrations for any support need. As part of your license, the following support is included at no additional charge:

- Bug fixes
- Installation problems (not including rework of any existing assets)
- Enhancements requests
- General "How Do I" questions

The following services (and any others not explicitly listed above) are available as contract support billed by hour plus any expenses:

- Rework existing business processes/maps/XSLTs
- Custom business processes/maps/XSLTs



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