Active Circle

Release Notes

Active Media Connector V5.0.0

September 2018

oodrive

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1. Update operation

From version 4.6 onward, the Active Media Connector upgrade procedure verifies the prerequisites necessary for it to run correctly and also updates the corresponding dependencies if required. This operation requires an Internet connection.

For the detailed procedure, refer to the AMC installation and upgrade document:
AMC_Installation Guide-4.6-EN

1.1. HTTPS protocol handling

In order to ensure secure communication between the nodes, AMC and the client, AMC version 5.0.0 handles HTTPS access. This can be disabled or may coexist with HTTP to ensure backward compatibility. More information on its implementation can be found here.

HTTPS is enabled transparently by the installer, either during an installation or update operation. By default, a self-signed certificate is used. Access to the service can therefore now be obtained via this URL https://<name or ip>:8443/acapi/.

To retain backward compatibility with other options and third-party development, http access remains available on port 8081.

ENSURING SECURITY OF COMMUNICATION BETWEEN ACTIVE CIRCLE AND AMC

To ensure the security of dialog between the nodes (plugin) and AMC, the plugin configuration needs to be updated on each node.

Edit the file: /activecircle/cell/plugins/AcapiPlugin.conf

```
acapi {
    ...
    // replace 'http' with 'https' in the existing url and replace
           port 8081 with 8443, e.g.:
    // 'http://acapi:8081/acapi/1.0/' becomes
           'https://acapi:8443/acapi/1.0/'
    url = 'https://acapi:8443/acapi/1.0/'
}
```

After modifying the configuration, restart the node.

ENABLE HTTPS REDIRECTION

To force AMC clients to use HTTPS, automatic redirection to HTTPS must be enabled by replacing the file /etc/tomcat/web.xml with the file /etc/tomcat/web.xml.NEW. This file contains a <security-constraint>...</security-constraint> block as illustrated below:

```
</web-app>
  ...
  </welcome-file-list>

  <!-- The block below forces the use of HTTPS by systematically
            redirecting all http requests to https -->
  <security-constraint>
     <!--
     <web-resource-collection>
        <web-resource-name>Automatic Forward to HTTPS/SSL</web-
            resource-name>
        <url-pattern>/*</url-pattern>
     </web-resource-collection>
     <user-data-constraint>
        <transport-guarantee>CONFIDENTIAL</transport-guarantee>
     </user-data-constraint>
     -->
  </security-constraint>
</web-app>
```

To go back, replace the original file or comment out the entire block: <security-constraint>...</security-constraint>.

DISABLE HTTPS

To completely disable HTTPS access, the secure connector must be commented out (add "<!–" before the line and "–>" after) in the configuration file /etc/tomcat/server.xml:

```
<!-- <Connector port="8443"
            protocol="org.apache.coyote.http11.Http11Protocol"
            URIEncoding="UTF-8" maxThreads="150" SSLEnabled="true"
            scheme="https" secure="true"
            keystoreFile="/etc/tomcat/acapi.p12"
            keystorePass="activec" keystoreAlias="tomcat"
            clientAuth="false" sslProtocol="TLS"/> -->
```

Once the changes have been made, relaunch the tomcat service:

- CentOS 6: `service tomcat6 restart`
- CentOS 7: `systemctl restart tomcat`

Make sure that the plugin configuration for each node is correctly configured with the HTTP URL.

MODIFY THE SSL CERTIFICATE

The default SSL certificate installed is a self-signed certificate, which can be replaced with another certificate. To do this:

1. Prepare a "keystore" in PKCS12 format, containing the private key

2. Modify the attributes of the secure connector in the file /etc/tomcat/server.xml:

Attribute	Description	Example
keystoreFile	Full path to the PKCS12 file	`/etc/tomcat/acapi.p12`
keystoreAlias	Alias allowing the key to be retrieved in the PKCS12 file	tomcat
keystorePass	Password for the PKCS12 file	152465*-ffq

3. Once the changes have been made, relaunch the tomcat service:
   - CentOS 6: `service tomcat6 restart`
   - CentOS 7: `systemctl restart tomcat`

1.2. Connection password management

With the same goal of enhancing security, authentication information has been removed from AMC configuration files. If the password for the Active Circle "admin" account is changed, it will no longer be necessary to report this change in AMC.

NEW INSTALLATIONS

For new installations, the pre-installed configuration file no longer contains a password. No configuration is necessary, except for when using planned transfer jobs (/transferPolicy path), as is typically the case with the Datamover. In this specific case only, you must define the FTP account to be used for the transfers in the file "/etc/ac/acapi-config.groovy":

```
users {
   // datamover user
   datamover { password = "****" }
}
roles { activeCircleFtpUser = 'datamover' }
```

If the account used is not "admin" (as is the case in the example above), you must provide access to the shares you would like to use for transferring to the user in question.
Finally, relaunch the tomcat service for the changes to be applied:

- CentOS 6: `service tomcat6 restart`
- CentOS 7: `systemctl restart tomcat`

UPDATES

For updates, the old configuration file is stored. If the Datamover is not used, the installation can be made secure by editing the file "/etc/ac/acapi-config.groovy" in order to remove the user declaration (usually "admin"). In this case, the entire 'users' block below can be removed:

```
users {
   ...
}
```

Finally, relaunch the tomcat service for the changes to be applied:

- CentOS 6: `service tomcat6 restart`
- CentOS 7: `systemctl restart tomcat`

2. Compatibility matrix

Not all AMC versions are compatible with all Active Circle versions.
The compatibility matrix for the Active Media Connector is as follows:

Active Circle version	AMC version
4.0.2 P18	4.4.3
4.6.2	4.6.1
5.0.0	5.0.0

ADM 1.4.0 and AME 2.2.4 are compatible with AMC version 5.0.0 with HTTP access. HTTPS access will become supported at a later date with a new version for both options.

3. Active Media Connector V5.0.0 – September 2018

This new version of AMC enables compatibility with Active Circle version 5.0.0. It offers new features, as well as a security batch with HTTPS access, and brings an end to passwords in the configuration file. See Chapter 1. Installation and update operation.

SHA256 HASH-VALUE

5240510e2d66d7db7fc156756e9dd24090c36b07289725921e87cf5759971c8b amc-5.0.0.bin

NEW AUDIT EVENT HANDLING

Audit events corresponding to the new features provided by version 5.0.0 are handled by the new AMC 5.0.0 version:

- Automatic calculation of a file's signature after it is dropped
- Archiving audit

For more information, see the online documentation for the new version.

EXTENDED ATTRIBUTE MANAGEMENT

Extended attribute management has been added to AMC, allowing for viewing and modifying.

Reading of all attributes

The following GET request allows all file attributes to be read: "//share/path/to/dir/thefile":

```
GET http://server:port/acapi/1.0/file/share/path
            /to/dir/thefile?showXAttr=true
```

Attribute modification

The GET method is used to retrieve information, and therefore read attributes (see the previous section). The POST, PUT and DELETE methods can be used to modify attributes. In our scenario, the file is the resource, so information changes must be made using the PUT method:

```
PUT http://server:port/acapi/1.0/file/share/path/to/dir/thefile
```

The content of the PUT method must be extensible; all information relating to extended attributes will be provided in a "xattr" block.

Definition of all attributes

Initialization of all attributes involves deleting the existing attributes to then add the attributes provided with the request:

```
{
  "xattribute": {
    "init": {
      "user.Name": "Support",
      "user.Mail": "customer-support@active-circle.com",
      "user.Phone": "xx xx xx xx xx"
    }
  }
}
```

Deletion of all attributes

The deletion of all attributes involves initializing without attributes:

```
{
  "xattribute": {
    "init": {}
  }
}
```

Deletion of one or more attributes

```
{
  "xattribute": {
    "delete": [
      "user.Name",
      "user.Mail"
    ]
  }
}
```

Addition/modification of one or more attributes

```
{
  "xattribute": {
    "modify": {
      "user.Name": "Mickael",
      "user.Mail": "m.lanoe@oodrive.com"
    }
  }
}
```

Combinations of "init", "delete", "modify" actions

The two actions "delete" and "modify" can be combined to authorize the deletion and addition of attributes in the same request. In this scenario, the "delete" action is processed before the "modify" action:

```
{
  "xattribute": {
    "delete": [
      "user.Phone",
      "user.Address"
    ],

    "modify": {
      "user.Name": "Mickael",
      "user.Mail": "m.lanoe@oodrive.com"
    }
  }
}
```

To simplify the implementation, the actions will be processed in the following order:

- "init"
- "delete"
- "modify"

4. Version Control

4.1. Reminder of functional additions in version 4.6

4.1.1. Active Media Connector V4.6.1 – February 2018

SIGNATURE SHA256

7757baeb60112d99162a6484d61b277cbe2b7710b8419273fa54297467f006d9 amc-4.6.1.bin

FIX

Fixed a regression brought by version A.6.0 effecting the display of archive information related to transfer.

4.1.2. Active Media Connector V4.6.0 – November 2017

SIGNATURE SHA256

9bbf511a5591417258345302adea38249a670711665474e5fc259a0935916dc3 amc-4.6.0.bin

INSTALLATION AUTOMATION

The AMC 4.6 installer now verifies the prerequisites necessary for it to run properly. If required, the dependencies are updated automatically during installation, such as updating to facilitate its deployment.

NEW PREREQUISITES

The AMC version 4.6 brings with it new prerequisites, as listed below:

Type	Software
Operating System	CentOS Linux 7.0* or higher
Java	Java 8
Application Server	Apache Tomcat version 7
Database	PostgreSQL

*CentOS Linux 6.X is only supported for existing systems.

IMPROVED SECURITY

SPAC: the AMC configuration file "/etc/ac/acapi-config.groovy", which contains sensitive data, is now only accessible for the "root" user.

GRAPHICS

The colors and logos have been updated to match the group's corporate branding.

CHECKSUM

SPAC: The MD5 signature management is no longer case-sensitive.
SPAC: Addition of a new option enabling file dropping to be limited when all MD5 calculation threads are occupied.

DOCUMENTATION

For greater clarity, the transferjobs documentation has been illustrated with new examples:

- for recovery jobs
- for transfers from Active Circle to the AMC file system

INTEGRATION OF FUNCTIONAL ADDITIONS FROM VERSION 4.4.3

For more detail, refer to the notes for version 4.4.3, provided below.

4.2. Reminder of functional additions in version 4.5

4.2.1. Active Media Connector v4.5.3 – December 2016

FIX

Corrected the pagination of the service file that was not working.

4.2.2.Active Media Connector v4.5.2 – November 2016

OPTIMIZED LOG MANAGEMENT AT PLUGIN LEVEL

SPAC: AMC log level modified so as to not saturate those from Active Circle.

4.2.3.Active Media Connector v4.5.1 – October 2016

FIX

Corrective maintenance following the addition of the LTFS and Cloud archiving support

4.2.4. Active Media Connector v4.5.0 – June 2016

ACTIVE CIRCLE 4.5.0 SUPPORT

Support for the new Active Circle version 4.5.0. This support specifically offers the management of new locations related to the LTFS & Cloud archiving.

This minor 4.5.X version does not include the functional additions from version 4.4.3.

IMPROVED MANAGEMENT OF TEMPORARY FILES

In the context of the use of AMC by Active Data Mover, the stoppage of a file transfer terminates the action in progress.

FIX

SPAC-268 & SPAC-311: The sorting used in the jobs takes into account primary and secondary pools.

4.1. Reminder of functional additions in version 4.4

4.1.1. Active Media Connector v4.4.3 – July 2017

MONITORING OF TRANSFER IN PROGRESS

For all active transfers, it is possible to find out the file size (size), its source (src), its destination (dst) and the number of bytes transferred (progress).
This progress is updated approximately every 5 seconds, asynchronously by the server.

LOAD BALANCING ON TRANSFERJOBS

When a transfer is carried out without specifying the node, a round-robin strategy is put in place between the available nodes. In the context of an update, this feature is not activated by default; refer to the transferjob documentation to activate it.

ERROR CODES ADDED TO THE DOCUMENTATION

MODIFIED NUMBER OF COMPETING JOBS

The default number of competing transfer Job is 3.
This value may be modified in the configuration file `acapi-config.groovy`, by uncommenting the following line:

```
// quartzThreadCount = 3
```

In the case of an upgrade, the parameter can be found in `acapi-config.groovy.NEW` and copy/pasted into `acapi-config.groovy`.

The new value will be taken into account after the tomcat service is restarted:

- CentOS 6: `service tomcat restart`
- CentOS 7: `systemctl restart tomcat`

CENTOS 7 SUPPORT

4.1.2. Active Media Connector v4.4.2 – June 2017

FIX

SPAC: Corrected the pagination of the service file that was not working.

4.1.3. Active Media Connector v4.4.1 – November 2016

FIX

SPACDEV-250: The comparison method for the incremental transfer is now always consistent, even if the mtime is not available.

4.1.4. Active Media Connector v4.4.0 – January 2016

RENAMING OF FILES WHEN TRANSFER IS COMPLETE

Files transferred via archiving or recovery jobs are transferred with a temporary name. Once the file has been transferred, it is renamed with its original name.

The naming convention for temporary files is as follows:

```
<original filename with extension>.<job id>.amc
```


ACTIVE CIRCLE, une société du groupe Oodrive - 26, rue du Faubourg Poissonnière - 75010 Paris, France
T : +33 (0) 1 34 65 90 29 - F : +33 (0) 1 46 22 32 00
Société par Actions Simplifiée au capital de 96 090 Euros – RCS Paris 443 978 408 N.A.F. 5829A

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