



THE POWER TO TRUST

# Data3Sixty<sup>®</sup> Analyze

Release Notes

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# 1. Setup requirements

	Server	Desktop
<b>Supported platforms</b>	<p>The following operating systems are supported on the Data3Sixty Analyze server product:</p> <ul style="list-style-type: none"><li>• Windows Server 2016 64-bit (Server with Desktop Experience)</li><li>• Windows Server 2012R2 64-bit</li><li>• RedHat Enterprise 6.X 64-bit</li><li>• RedHat Enterprise 7.X 64-bit</li><li>• SUSE Linux Enterprise Server 12 SP3</li></ul> <p>The following browsers are supported on both server and desktop:</p> <ul style="list-style-type: none"><li>• Chrome</li><li>• Internet Explorer 11</li></ul>	<p>The following operating systems are supported on the Data3Sixty Analyze single-user desktop product:</p> <ul style="list-style-type: none"><li>• Windows 7 64-bit</li><li>• Windows 10 64-bit</li></ul>

	Server	Desktop
<b>System requirements</b>	<p>The minimum hardware specification for the server product is as follows:</p> <ul style="list-style-type: none"> <li>• 8GB RAM base + 1GB for Database + 2GB per core.</li> <li>• Minimum 4 cores for an on-premises server instance.</li> </ul> <div style="border: 1px solid #0070C0; padding: 5px; margin-top: 10px;"> <p> <b>Note:</b> As the number of users and/or the number of scheduled jobs increases, you should look to increase the number of cores and thus memory.</p> </div> <p>For installations on Windows Server, you must install the required Visual C++ Redistributable Packages:</p> <ul style="list-style-type: none"> <li>• <a href="#">Visual C++ Redistributable Packages for Visual Studio 2008.</a></li> <li>• <a href="#">Visual C++ Redistributable Packages for Visual Studio 2013.</a></li> </ul> <div style="border: 1px solid #0070C0; padding: 5px; margin-top: 10px;"> <p> <b>Note:</b> The Power R node and the nodes in the Statistical and Predictive Node Pack process data in-memory. Additional RAM will be required when processing data sets with a large volume of data. Similarly, if the R node is used, the machine hosting the R environment must have sufficient available RAM to process the data.</p> </div>	<p>The minimum hardware specification for the desktop product is as follows:</p> <ul style="list-style-type: none"> <li>• 8GB RAM.</li> <li>• Intel Core i5 or 4-core equivalent processor minimum (i7 recommended).</li> </ul>
<b>App server databases</b>	Postgres	H2
<b>Authentication servers (server only)</b>	<ul style="list-style-type: none"> <li>• Active Directory</li> <li>• OpenLDAP</li> </ul>	N/A

	Server	Desktop
<b>Authentication protocols (server only)</b>	<ul style="list-style-type: none"> <li>• LDAP</li> <li>• LDAPs</li> </ul>	N/A

**App servers**

Tomcat 9.0.16

**Accessible databases**

Within the Designer, you can connect your analytic application to a number of databases. The following accessible databases are supported:

- Oracle 11g, 12c
- Teradata 14.10 / 15.10
- MySQL
- MS SQL Server 2012
- MongoDB 2.4.9
- Spark 1.5.0
- Hadoop 2.6.0

## 2. Latest release - 3.4.3

The availability of the following new features, enhancements and corrected issues is dependent on the installed edition of the product and licensed features.

### 2.1 What's new

#### JDBC nodes

The **DBOptions** property of the **JDBC Query**, **JDBC Execute**, and **JDBC Store** nodes has been converted to a multi-line property.

You can now specify each option as a key/value pair on a separate line. For example:

```
key1=val1  
key2=val2
```

You can also still specify all options on a single line, delimited by an ampersand character. For example:

```
key1=val1&key2=val2
```

#### Python editor

Following the [Style Guide for Python Code](#), the Python Editor that you can use to add Python scripting to nodes has been updated to indent by four spaces and convert tabs to spaces when indenting.

#### DB2 drivers

Previously, to use DB2 you needed to download and install the DB2 drivers. DB2 drivers are now included with Data3Sixty Analyze.

#### Data viewer

A system property has been added that you can use to define the number of records that are displayed in the Data Viewer. Previously, the data viewer displayed a maximum of 1000 records.

To configure the property, add the following line to your `site.prop` file, replacing `<records>` with the required value:

```
ls.lae.dataviewer.pageSize=<records>
```

The value will be applied to all users.

The maximum value is 20 000. If you enter a value greater than 20 000, the first 20 000 records will be displayed.

## BRD File node

Support for PassThroughFields has been added to the **BRD File** node.

## 2.2 Corrected issues

Issue Summary	Issue Number
Fixed an issue where the <b>XML Data</b> node sometimes produced incorrect output when flattening complex, nested, repeating structures into flat output records.	LAE-21990
Improved error handling and error messaging when the <b>Change Metadata</b> node fails when trying to change a field to Datetime where the input is unicode and contains a value of "Null" as opposed to being a NULL value.	LAE-21956
Fixed an issue in the <b>Sample</b> node where the link to the documentation for the node was incorrect.	LAE-21955
Fixed an issue attempting to move a document to its present directory, and resolving the Move Conflict by using the Change ID action caused an authentication error.	LAE-21947
Fixed an issue in the data viewer where some valid dates were being incorrectly flagged as invalid when used in a filter.	LAE-21941
Fixed an issue with the <b>XML Data</b> and <b>JSON Data</b> nodes where they would sometimes fail with cryptic errors when processing very large (multi GB) data files with a structure that required the data to be saved to a <code>.tmp</code> file during parsing.	LAE-21939
Fixed an issue where it was possible to delete imported LDAP users while deleting multiple users.	LAE-21936

Issue Summary	Issue Number
Fixed an issue with nodes, for example <b>Meta Check</b> , where downstream items incorrectly triggered "execution has no running processes but there are still nodes executing" warnings. If downstream nodes were in a composite that was not part of the execution, further warnings could incorrectly be displayed.	LAE-21931
Fixed an issue where the <b>Modify Field Prefix</b> node was classified as a superseded node.	LAE-21919
Fixed an issue when using the <code>todict()</code> method on the python "fields" objects, where the keys in the dictionary were converted to lower-case from the input field names. The case of the input metadata is now preserved, and used for the dictionary keys.	LAE-21897
<p>Fixed an issue where a system backup could not run while there were any ongoing executions or schedules.</p> <p>Active executions are now effectively suspended, and resumed when the backup is completed, so ongoing executions should not interfere with the system backup.</p> <p>Previously, the backup system paused the scheduler, and waited until all currently running executions and schedules were completed. If you had very long running or unresponsive nodes, this could cause an outage while the system waited to perform the backup.</p>	LAE-21869
Fixed an issue in the <b>Merge</b> and <b>Lookup</b> nodes where it was not possible to type the name of a field in the <b>Match Keys Grid</b> to filter column names in order to find the correct column.	LAE-21864
Fixed an issue where the system could become deadlocked if an operation to clear a node's state interfered with an ongoing execution.	LAE-21839
Fixed an issue where an error in a node's Enabled property, was not always displayed correctly in the error panel.	LAE-21830
Fixed an issue related to connecting to a Kerberized SFTP server when using user/password to authenticate.	LAE-21827
Fixed an issue where a run property value could not be cleared after it was set in a schedule definition.	LAE-21815



Issue Summary	Issue Number
Fixed an issue where the Data3Sixty Analyze Script <code>groupString</code> macro was not working correctly when only one argument was supplied.	LAE-21770
Fixed an issue where the Data3Sixty Analyze Script function operators using the "&" token were not working in conjunction with the "and" and "or" operators, for example when using the "reduce" function, <code>x = reduce(&amp;and, something)</code> or <code>x = reduce(&amp;or, something)</code> .	LAE-21769
Fixed an issue where imported legacy BRGs that contained bypasses that were meant to pass through bundled data sets were only passing through the first data set.	LAE-21768
Fixed an issue where BRGs using the Windows file format could be corrupted when imported to Linux Data3Sixty Analyze installations, causing a data flow to fail.	LAE-21688
Fixed an issue where the <b>CSV/Delimited Data</b> and <b>Create Data</b> nodes could fail with a "Stream Closed" error when the system was under heavy load.	LAE-21431
Fixed an issue where modifying properties on a node within a composite node could cause a permissions problem, preventing a user from copying the composite node.	LAE-10520

## 3. New in 3.4.2

The availability of the following corrected issues is dependent on the installed edition of the product and licensed features.

### 3.1 Corrected issues

Issue Summary	Issue Number
Fixed the link from the application to the 'Python Scripting' section of the help.	LAE-21623
Fixed an issue that prevented parent nodes from resolving correctly after importing legacy data flows and legacy library nodes if a library node inherited from a parent library node and shared the same name as the parent.	LAE-21640
Fixed a number of concurrency issues that caused intermittent inconsistencies. This resulted in "ConcurrentModificationException" messages in the webapp log while data flows were being compiled, and may have also resulted in some inconsistent compilation operations.	LAE-21656
Fixed an issue that caused the Excel nodes to occasionally report errors on Linux, such as 'Can't connect to X11 window server using ':0' as the value of the DISPLAY'.	LAE-21658

## 4. New in 3.4.1

The availability of the following new features, enhancements and corrected issues is dependent on the installed edition of the product and licensed features:

- ★ New Data Profiler node
- ★ New Unique node identifiers
- ✓ Fix Extract ERP Table node
- ✓ Fix Excel File node
- ✓ Fix API
- ✓ Fix XML Data node
- ✓ Fix FTP nodes
- ✓ Fix Backup
- ✓ Fix User interface
- ✓ Fix Sort node
- ✓ Fix Shutdown

### 4.1 New features and enhancements

#### Data Profiler node

The new Data Profiler node allows you to examine input data to determine its data type and statistical composition. The node outputs a detailed JSON description that you can then use for further analysis. The description includes details of the data such as its current and new data type, minimum and maximum values, the number of values that match the analysis and a confidence measure for the data field, and counts of null or blank fields.

You can add your own Logical types - also known as semantic types - to those detected by default by the **Data Profiler** node. To do this, you provide a JSON specification that the Data Profiler node uses to identify a type. For example, you can specifying the regular expression `\\d{3}-\\d{2}-\\d{4}` to detect Social Security Numbers.

For more information, see the "Data Profiler" help topic.



**Note:** This is an experimental node that is not yet fully supported and may be subject to change in future versions.

## Unique node identifiers

New property substitutions have been added to enable better identification of a node's path within a data flow, the data flow itself, and per-run identifiers. The unique identifier allows you to detect each individual instantiation of a node, which can be useful when you have a data flow that contains multiple instances of the same node.

Previously, if a property contained multiple textual substitution references using the `{{^container:propertyName^}}` syntax, these were not working correctly. This has been fixed.

## 4.2 Corrected issues

Issue Summary	Issue Number
Excel File node Fixed a problem where the Excel File node was not correctly reading some Excel files generated by 3rd party libraries - ie not by Excel - when the library created <code>.xlsx</code> files that had namespace qualifiers in the generated XML.	LAE-21602

Issue Summary	Issue Number
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Extract ERP Table node

Fixed an issue where the ErrorDetails output defined some fields as containing string instead of unicode metadata, which could cause the node to fail on unmappable characters.

LAE-21599

Performance has been improved when extracting relatively small - in terms of byte size - fields, and ensuring some tables where the size of the key fields combined is greater than the RowByteLimit bytes can still be read so long as the size of the fields being extracted is less than the RowByteLimit.

Fixed an issue that meant the error message when the size of the key fields was too large to be processed (greater than the RowByteLimit) reported the total key size incorrectly.

Updated the way the node handles **Options**, by ensuring they fit into the size limits imposed by RFC\_READ\_TABLE when the Options are in the form <FIELDNAME> in ('<VALUE\_1>', '<VALUE\_2>', ..., '<VALUE\_N>').

Fixed an error where the node would incorrectly configure the RowCount sent to SAP when multiple extracts were required to retrieve all fields for a given record, which caused the subsequent extracts to have a reduced RowCount specified, meaning the node would encounter "missing extract keys" issues if the number of records returned was less than one half of the value of RowCount specified by the user.

### Extract ERP Table node

In some cases, when the **Extract ERP Table** node needs to query data from the SAP system to rejoin data using key fields, some of the values in the key fields cannot be correctly queried using the Options clause in `RFC_READ_TABLE`.

LAE-21549

The node was using the fields identified as key fields in table DD03L to generate options to query SAP. However, sometimes not all of these fields are required to form a unique record key for a table.

The following properties have been added to the node.

### UniqueKeyFields

You can use the **UniqueKeyFields** property to specify the fields that form a unique key in the table.

- If no value is specified by this parameter, the node uses the value that is set in the server property  
`ls.brain.node.erp.sapconnector.extractTable.<TableName>-Keys`.
- If a unique key set needs to be set for a given table, it can be set via a server property which then takes effect for all **Extract ERP Table** nodes trying to extract from that table. If no such property exists, the node will use any pre-configured defaults it knows for the specified table.
- Pre-configured defaults have been added for BSAD, BSAK, BSEG, BSAS, BSID, BSIK, BSIP and BSIS. If there is no **UniqueKeyFields** property set, no corresponding `ls.brain.node.erp.sapconnector.extractTable.<TableName>-Keys` server property set and the table being extracted has no pre-configured default unique key fields set, the node resorts to using all fields specified as key fields in the table DD03L for the table to extract.

### UnexpectedExtractKeysBehavior

**UnexpectedExtractKeysBehavior** determines the behavior - one of **Error**, **Log**, or **Ignore** - when the node requests the data for field subsets in batches and must rejoin the different extracts for each row using key fields, and some data is returned via a request which cannot be matched to the keys extracted in the initial request. This should only occur if data is changing on the table during the execution of the node and should only occur if the number of records to extract, based on the `Options` clause, is less than both the **RowBatchSize** and the **RowCount**.

The default value is **Log**.

Extract ERP Table node

### MissingExtractKeysBehavior

LAE-21549

The **MissingExtractKeysBehavior** property determines the behavior - one of **Error**, **Log**, or **Ignore** - when the node requests the data for field subsets in batches and must rejoin the different extracts for each row using key fields, and there are no records extracted in a given request that match the keys extracted in the initial request.

This should only occur if data is changing on the table during the execution of the node, where a record is deleted which was retrieved in the first extract, or the value of a key field in such a record changes. This could happen if there are key field values in the initial request that contain characters that cannot be used as part of a query in the `OPTIONS` clause to `RFC_READ_TABLE`. In this case, the fields would normally be identified as key fields in `DD03L` but not strictly required to form a unique identifier to the record. If that is the case, then the **UniqueKeyFields** property, or the corresponding server property can be used to specify a minimal set of structured fields required to form a unique key on the table.

If set to **Error**, the node errors when a mismatch is encountered and the error details are also written to the error output pins.

If set to **Log**, the error details are also written to the error output pins when such a mismatch is encountered.



**Note:** The node can still fail if the value is set to **MissingExtractKeysBehavior**, because the errors contribute to the error count, and the node will fail if **ErrorThreshold** is exceeded.

If set to **Ignore**, the errors are simply ignored and nothing is written to the error output pins.

The default value is **Log**.

Issue Summary	Issue Number
Extract ERP Table node	
The performance of the Extract ERP Table node has been improved.	LAE-21540
The default value of the <b>RowBatchSize</b> property has been updated to 100 000.	LAE-21539
Fixed an issue where the <b>Extract ERP Table</b> node failed with a key mismatch error in some cases when extracting records that contain key fields with leading whitespace characters.	LAE-21538
Fixed an error where the <b>Extract ERP Table</b> node failed with an error message stating that the specified field was not available in the table metadata when duplicate field names were specified in the <b>Fields</b> property. A warning is now issued, and the duplicate field name is ignored.	LAE-21537
Fixed an error where the <b>Extract ERP Table</b> node could fail when run with multiple <b>Options</b> clauses provided from an input field.	LAE-21534
Fixed an issue where the <b>Extract ERP Table</b> node would error if there were any key fields in the "DD03L" table for a given table to extract, when the specified field was not returned in the <b>FIELDS</b> response from <b>RFC_READ_TABLE</b> for that table. Some fields, for example <b>INCLUDE</b> , can be referenced in the "DD03L" table without being present in the table extracts, and should be ignored. In this case, the node now issues a warning, and additional fields from the "DD03L" table are ignored.	LAE-21499
Fixed an error where the <b>Extract ERP Table</b> node would operate incorrectly, and failed reporting "A condition specified dynamically has an unexpected format.". This could happen if the node needed to generate a query to extract data, where one of the key field values in the query contained a single quote.	LAE-21498



Issue Summary	Issue Number
<p>Extract ERP Table node</p> <p>Fixed an error where the <b>Extract ERP Table</b> node would operate incorrectly and could fail, reporting that data had changed in the SAP system. The node could fail if it needed to perform multiple queries on key fields in a table where the key fields were taking up more than 127 bytes.</p>	LAE-21497
<p>Fixed an error where the <b>Extract ERP Table</b> the node would error with a message returned from SAP "Whole number overflow on addition" if a <b>RowSkips</b> value was set but no <b>RowCount</b> value was set.</p>	LAE-21490
<p>LDAP</p> <p>Fixed an issue where an LDAP User Import was removing the System Role from previously imported users, preventing them from adding properties to nodes.</p>	LAE-21598
<p>API</p> <p>Fixed a problem where the REST API endpoint <code>api/login/flows</code> was misnamed as <code>api/login/rest/flows</code>, meaning it was not accessible without authenticating. The endpoint is now accessible without authentication.</p>	LAE-21563
<p>XML Data node</p> <p>Fixed an issue where the <b>XML Data</b> node would previously error with a <code>NullPointerException</code> if the following conditions were met:</p> <ul style="list-style-type: none"> <li>• The node was processing data from an input</li> <li>• <b>PassThroughFields</b> is configured to pass through some fields from the input</li> <li>• <b>NoRecordForOutputBehavior</b> was not set to Error</li> <li>• An output existed that had no fields from the XML file(s) mapped to it</li> </ul>	LAE-21559

Issue Summary	Issue Number
<p>FTP nodes</p> <p>Fixed an issue where node properties could be displayed in <b>FTP Get</b> error messages.</p>	LAE-21517
<p>Backup</p> <p>Fixed an issue where backups failed if a scheduled run started before the backup started, and completed before the backup had taken place, because log files that were marked for backup in the process were deleted.</p>	LAE-21473
<p>User interface</p> <p>Fixed issue where misleading errors could be shown if a user clicked the <b>Save</b> button in a Data Flow twice in quick succession.</p>	LAE-21447
<p>Sort node</p> <p>Fixed an issue where the <b>Sort</b> node could run out of memory when processing large numbers of very narrow records, by reducing the per-record memory footprint for record keys.</p> <p>The <b>BufferSize</b> property on the <b>Sort</b> node was previously only applied to the first batch of records loaded into memory, and thereafter the buffer was dynamically resized. Now, <b>BufferSize</b> can be used as a hard limit for the number of records to hold in memory for any batch, to ensure that in the case of many very narrow records followed by some very wide ones - for example in the case where fields were normally null, but could sometimes be very large - the node can be constrained to not use too much memory.</p> <p>The same property has also been added to <b>Merge</b> and <b>Join</b> nodes.</p>	LAE-21443
<p>Shutdown</p> <p>Fixed an issue where shutdown scripts could corrupt the database if they did not complete properly, preventing Data3Sixty Analyze from being restarted.</p>	LAE-21400

## 5. New in 3.4.0

The availability of the following new features, enhancements and corrected issues is dependent on the installed edition of the product and licensed features:

- ★ New      Modify Fields node
- ★ New      New Generate Data node
- ★ New      Dummy Input node superseded
- ★ New      Backward compatibility
- ★ New      Node keyword search
- ✓ Fix      Lucene library
- ✓ Fix      Data viewer
- ✓ Fix      JDBC drivers
- ✓ Fix      Properties panel
- ✓ Fix      Amazon Redshift
- ✓ Fix      Correlation nodes
- ✓ Fix      Head node
- ✓ Fix      Modify Fields node
- ✓ Fix      Send Email node
- ✓ Fix      Switch node
- ✓ Fix      Clock

- ✓ Fix Data sets
- ✓ Fix Error reporting
- ✓ Fix ERP Table
- ✓ Fix Brainscript sum and count macros
- ✓ Fix BRG import

## 5.1 New features and enhancements

### Node enhancements

Feature	Description
Modify Fields node	<p>Auto type detection</p> <p>You can now use the <b>Auto</b> type conversion option to detect the input field type on string and unicode fields, and automatically convert the corresponding output field to an appropriate type, for example long or int.</p> <p>ConvertLeadingZeroes option</p> <p>Using the ConvertLeadingZeroes option you can specify whether or not string and unicode fields that contain leading zeros are automatically converted to long or int output fields when the "Auto" type detection and conversion option is selected.</p> <p>For more information, see the "Modify Fields" node help topic.</p>

Feature	Description
New Generate Data node	<p>A new node, <b>Generate Data</b>, has been added.</p> <p>You can use this node to create data from a python script, enabling you to generate output data without needing an input.</p> <p>For example, using the <b>ConfigureFields</b> option, you can generate two output fields:</p> <pre>out1.Text= str out1.LastWeek = datetime.datetime</pre> <p>You can then use the <b>CreateRecords</b> option to write output records containing data for those fields:</p> <pre>out1.Text= 'Test ' out1.LastWeek = datetime.datetime.now() - datetime.timedelta(days=7)</pre> <p>When you run the node, the output <b>out1</b> will contain a record consisting of two fields called "Text" and "LastWeek". The value of the "Text" field in the output is <code>Test</code>, and the value of "LastWeek" is a datetime value of seven days before the node was run.</p> <p>For more information, see the "Generate Data node" help topic.</p>
Dummy Input node superseded	The <b>Dummy Input</b> node is superseded by the <b>Create Data</b> node and the new <b>Generate Data</b> node.


## LNA files

Feature	Description
Backward compatibility	Any data flows exported as LNA files from version 3.4.x of Data3Sixty Analyze can be imported to any other 3.4.x version. This will allow backward compatibility in future versions of Data3Sixty Analyze.

## UI enhancements

Feature	Description
Node keyword search	<p>You can now search for nodes in the <b>Nodes</b> panel by using pre-defined keywords as well as searching by node name. This can make finding the right node easier when you don't already know the name of the node you are looking for.</p> <p>For example, the <b>Directory List</b> node can be found by entering the keywords 'file' or 'folder' as well as by entering any part of the name of the node itself. Similarly, using the keyword 'merge' now lists the complete set of Correlation nodes.</p> <p>For more information, see the "Browsing for nodes" help topic.</p>

## 5.2 Corrected issues

Issue Summary	Issue Number
<p>Lucene library</p> <p>Fixed a problem with the Lucene library that could cause index corruption.</p>	LAE-21259
<div style="border: 1px solid #0070C0; padding: 5px;"><p> <b>Tip:</b> Any customers with suspected index corruption should contact support for help.</p></div>	

### Data viewer

Fixed a problem where the sort order on a date field in the data viewer was reversed when using the Add nodes to data flow option in the data viewer to add a Sort node.

LAE-9802

Issue Summary	Issue Number
<p>JDBC drivers</p> <p>The following JDBC drivers have been updated for this release:</p> <ul style="list-style-type: none"> <li>• SQL Server</li> <li>• Oracle</li> <li>• MariaDB</li> <li>• Redshift</li> <li>• Postgres</li> </ul>	<p>LAE-21272</p> <p>LAE-21273</p> <p>LAE-21274</p> <p>LAE-21275</p> <p>LAE-21276</p>
<p>Properties panel</p> <p>Fixed an issue where the Properties panel did not open when the correct keyboard shortcut was used (Ctrl+3).</p>	<p>LAE-21360</p>
<p>Amazon Redshift</p> <p>Fixed an issue where selecting Amazon Redshift for the value of <b>DbType</b> did not work properly, resulting in error messages.</p>	<p>LAE-21336</p>
<p>Correlation nodes</p> <p>A number of improvements have been made to the stability of the <b>Lookup</b>, <b>Join</b>, and <b>Merge</b> nodes.</p>	<p>LAE-9337</p> <p>LAE-10273</p> <p>LAE-10878</p>
<p>Head node</p> <p>Performance improvements have been made to the <b>Head</b> node, for example in situations where the node produces a large number of records from an input with a large number of fields.</p>	<p>LAE-21280</p>

Issue Summary	Issue Number
<p>Modify Fields node</p> <p>Additional properties have been added to the Modify Fields node to improve error handling:</p> <ul style="list-style-type: none"> <li>• <code>ErrorOutputIncludesExcludedFields</code> - when set to true, the error output does not include fields that have been excluded and would not show up on the main output.</li> <li>• <code>GeneratedFieldsPrefix</code> - sets a prefix for fields in the error output.</li> <li>• <code>SingleErrorRecordPerInputRecord</code> - when set to true, each input record generates a maximum of one error output record, rather than one error record per field conversion error.</li> </ul>	LAE-21306
<p>Previously, rename patterns were available in the <b>Modify Fields</b> node only where fields were included in the output by default. When fields were excluded from the output by default, you could still enter a rename pattern for the checked and included fields, but the pattern was not applied when the node was run. The pattern now applies whether fields are included or excluded by default.</p>	LAE-21296
<p>Send Email node</p> <p>Fixed an issue where the <b>Send Email</b> node failed to send multiple attachments if there was a space between them in the file list.</p>	LAE-21315
<p>Fixed an issue where the <b>Send Email</b> node sent an e-mail even when it reported an error, for example if a specified attachment cannot be found.</p>	LAE-21311
<p>The <b>Send Email</b> node now supports comma-separated lists of email addresses in the <b>ToAddress</b> and <b>CcAddress</b> fields for improved SMTP server compatibility. Existing address lists that are delimited by a semi-colon will continue to work as before, with the semi-colon converted to a comma before the list is processed.</p>	LAE-10691



Issue Summary	Issue Number
<p>Switch node</p> <p>Fixed an issue where clearing the <b>Switch</b> node incorrectly removed the temp file that was produced by its upstream node.</p>	LAE-9374
<p>Clock</p> <p>In some cases, warnings and errors would appear relating to clock (run dependencies) not being compiled correctly. This could happen when the clock was coming out of a node that did not have all of its inputs correctly wired, or from a node where something upstream from that node either did not have all of its inputs correctly wired, or was disabled.</p>	<p>LAE-21301</p> <p>LAE-21290</p> <p>LAE-10864</p>
<p>Data sets</p> <p>Fixed an issue with nested loops where something within the nested loop path that was not correctly connected or disabled resulted in compilation warnings and subsequent errors.</p>	LAE-10860
<p>Error reporting</p> <p>Error reporting has been improved for unexpected node failures, for example as a result of missing jars or bad classpath construction.</p>	LAE-21300

Issue Summary	Issue Number
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ERP Table

Fixed an issue where the **Extract ERP Table** sometimes returned duplicate or incorrect data.

LAE-10889

The following properties have been added to the node:


- `MaxOptionsSize` - handles large OPTIONS generated for record extracts. The default value is 3000.
- `MaxOptionsLineSize`- for custom RFCs if the RFC has a max size other than 72 characters for the OPTIONS clause. The default value is 72.
- `ExtractedDateFormat`, `ExtractedTimeFormat` - for date and time formats for custom RFCs
- `PassThroughFields`- use this property when running the node with an input pin. The default value is **None**.
- `JcoProperties`- for advanced properties to pass to Jco, such as trace settings.
- `MaxHeapSize` - allows for changing the heap size for the node when running larger extracts that require more memory. The default value is 2 GB.

The `ExecutionIdentifierField` and `ExcludeOutputIdentifiers` properties have been removed from the node.

The `RowSkips` property is no longer recommended. A warning is generated when this node is used.

The node will generally require more memory than previously.

For more information, see the "Extract ERP Table" help topic.



Issue Summary	Issue Number
<p data-bbox="181 352 665 388">Brainscript sum and count macros</p> <p data-bbox="181 399 1047 661">The brainscript sum and count macros had previously been deprecated. Using these macros would cause an error stating that groupSum and groupCount should be used instead. To improve upgrading and migration to new versions of Data3Sixty Analyze, these macros will now no longer result in errors. Instead, when they are encountered, the groupSum and groupCount macros will be invoked.</p>	<p data-bbox="1177 399 1323 430">LAE-21294</p>
<p data-bbox="181 745 349 781">BRG import</p> <p data-bbox="181 791 1047 898">Fixed an issue on BRG import where the import failed if an input or output that was referenced in a connection could not be found. The import now completes with a warning.</p>	<p data-bbox="1177 791 1323 823">LAE-10662</p>

## 6. Known issues and limitations

We would like to make you aware of the following list of issues and limitations.

If you encounter any other technical issues, please get in touch with us by visiting [support.infogix.com](http://support.infogix.com).

### 6.1 Third parties

The following table lists third party known issues and limitations:


Feature	Description
Apache	<p>The Spark SQL Query node has highlighted some Apache issues in the following scenarios:</p> <ul style="list-style-type: none"><li>• Selecting a field with binary type fails with the exception "UnresolvedUnionException: Not in union [\"bytes\", \"null\"]". This is already raised on Apache JIRA: <a href="https://issues.apache.org/jira/browse/AVRO-1401">https://issues.apache.org/jira/browse/AVRO-1401</a></li><li>• Describe operation returns 3 fields (col_name, col_type, comment) however the comment field is handled as not "nullable" but returns a NULL value.</li></ul> <p>The Spark SQL Query node processes against Hive tables. When Hive tables are processed by the cluster, the minimum memory requirement is higher compared to the memory required to run other Spark nodes that do not access Hive. The DriverMemory and ExecutorMemory both have a minimum 5G threshold. We recommend that you increase this for larger environments.</p>
Avro	<p>The Avro 1.7.7 specification lists some supported metadata constraints. Specifically, it places restrictions on the names of fields, as follows:</p> <ul style="list-style-type: none"><li>• The field names must start with [A-Za-z_]</li><li>• The field names must only contain [A-Za-z0-9_]</li></ul> <p>Avro 1.7.7 does not support date, time and datetime data types. As a result, if you want to upload data and use the Data3Sixty Analyze nodes, these fields will need to be converted to string data types.</p>

Feature	Description
Hadoop Hive Cluster	<p>When downloading files from the Hadoop Hive Cluster, the WebHDFS API automatically encodes files to base64 format. As a result, it is not always possible to view the contents of the download in the fields on the output.</p> <p>For example, if the <b>DataOutputMode</b> property is set to <b>Field</b>, due to the automatic base64 encoding, the encoded result will be visible instead of the contents.</p> <p>To view the contents, set the <b>DataOutputFieldEncoding</b> property to <b>None</b>. However, this is not always possible due to invalid characters in the original file; in this case, the workaround is to set the <b>DataOutputMode</b> to <b>File</b> and then import the data using one of the input connector nodes.</p>

## 6.2 Web application

The following table lists Data3Sixty Analyze known issues and limitations:

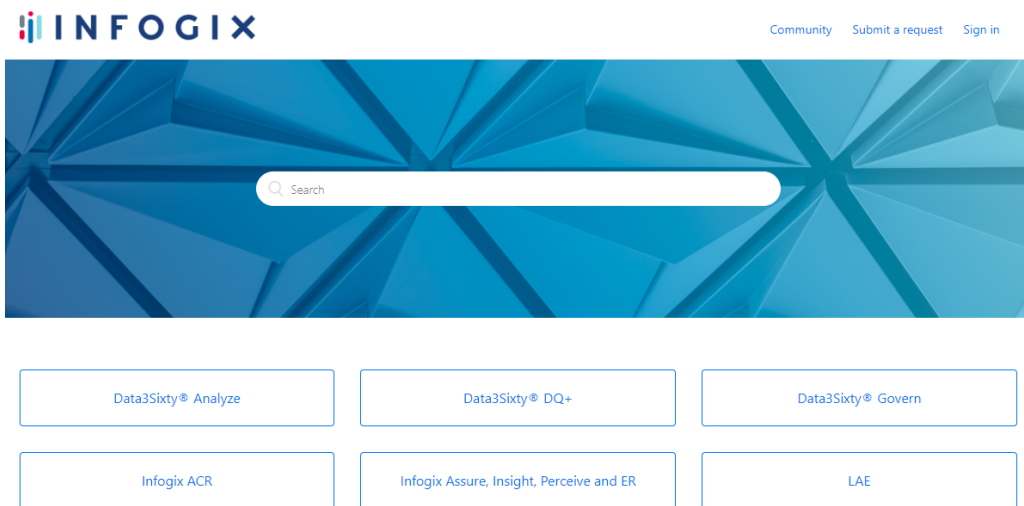
Feature	Description
Data viewer	<p>A sample of up to the first 1000 records of node data can be displayed in the data viewer.</p> <p>The data viewer only shows the first line of multi-line values. You can hover over the cell to show the full multi-line value in a tooltip. Selected records can also be copied from the data viewer to another application (e.g. Notepad).</p>
Composite library nodes created in previous versions	<p>When importing or running a data flow that was created in an older version of the product, you may see error messages if the data flow contains composite library nodes that have been upgraded since the data flow was first created. If the data flow did not previously show these errors, you can resolve the issues as follows:</p> <ol style="list-style-type: none"> <li>1. Open the data flow and select all nodes.</li> <li>2. Choose <b>Apply Auto-Fixes</b>.</li> <li>3. Save the data flow, then return to the Directory before reopening the data flow.</li> </ol>
Links from tooltips to help	<p>Although it is not currently possible to open the integrated help from the links in node property tooltips, you can manually navigate to the help by pressing <b>F1</b> then searching for the relevant topic.</p>



Feature	Description
Logistic Regression node	The Logistic Regression node does not support Unicode for categorical data.

## 7. Contact us

If you encounter any technical issues, we recommend that you visit the support portal at [support.infogix.com](https://support.infogix.com):




If your query has not been discussed previously, you can create a new topic and receive answers from our product experts.

Alternatively, you can log a support ticket:

1. Select **Sign in** from the top right corner of the screen.
2. If you have already registered, enter your **Email** and **Password**, then click the **Sign in** button.  
Or, if you are not a registered support portal user, click **Sign up**:

The image shows a 'Sign in to Infogix' modal window. It contains an 'Email' input field, a 'Password' input field, and a 'Stay signed in' checkbox. A blue 'Sign in' button is at the bottom. Below the button are links for 'I am an Agent' and 'Forgot my password'. At the bottom left, there is a link 'New to Infogix? Sign up' which is highlighted with a red box. Below this link is a note: 'Have you emailed us? Get a password. If you've communicated with our support staff through email previously, you're already registered. You probably don't have a password yet, though.'

- 
3. Once you have registered and signed in, select **Submit a request** from the top right corner of the screen.
  4. Complete all fields, then click **Submit** at the bottom of the screen.

## Download

Infogix recommends that you use the latest version of the product. To download Data3Sixty Analyze, please go to <https://www.infogix.com/data3sixty/analyze/analyze-download/>.

Our product is constantly evolving and input from you is highly valued. If you have any suggestions, please contact the product team by submitting a feature request on the [Community](#).



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