IBM TRIRIGA Application Platform
Version 3 Release 5

Administrator Console User Guide

Note
Before using this information and the product it supports, read the information in "Notices" on page 29.

This edition applies to version 3, release 5, medication 0 of IBM TRIRIGA Application Platform and to all subsequent releases and modifications until otherwise indicated in new editions.

Contents

Chapter 1. Administering with the Administrator Console

Analyzing and optimizing the health of the system are primary functions for a system administrator. IBM® TRIRIGA® developed the Administrator Console to facilitate these tasks. The IBM TRIRIGA Administrator Console categorizes data into segments to help a system administrator find information and make changes to it quickly and effectively. The Administrator Console is a centralized location for viewing and editing system settings to optimize system health.

Chapter 2. Signing in to the Administrator Console

The Administrator Console is a centralized location for viewing and editing system settings to optimize system health. Many of the settings in the Administrator Console are linked to IBM TRIRIGA properties.

Before you begin

You must have access to the Administrator Console. Another administrator can grant you access by using the Admin User Manager.

Procedure

1. Open a web browser and enter the following value into the address field:

   `http://`*`hostname:port/context path`*`/html/en/default/admin`

   Where *hostname:port* is the value for your environment and *context path* is the directory in which IBM TRIRIGA is installed.
2. If you are not already logged in to IBM TRIRIGA, enter your user name and password, and click **Login**.

Chapter 3. Administering agents and processes

In the Administrator Console, you can use the Agent Manager object to configure the process agents. You can use the Threads Manager object to control the threads that are started for each agent, and the Workflow Agent Manager object designate users for a workflow agent. You can use the Managed Processes object to start and stop reporting processes.

Agent administration

Agents perform background processes, such as cleaning up data, running workflows, and calculating formulas. You can manage and configure your agents in the Agent Manager object of the Administrator Console.

Multiple instances of the Workflow Agent and the Data Import Agent can run on the IBM TRIRIGA database. All other agents are single-instance agents, and problems can occur if more than one instance of a single-instance agent runs simultaneously.

Do not do data loading or integrations when the Cleanup Agent is running. The Cleanup Agent can throw deadlocks if hierarchy data is being imported while it is running

The Agent Manager identifies the agents that are currently running on all servers. You can request any running agent to stop, or you can start an agent on any active server. If you do not specify a server when you start an agent, the agent is started on the server that you are signed on to. To start an agent on the next available server, in the Start On column for the agent, enter `<ANY>`.

If an agent is running when the server goes down, the agent starts automatically when the server is restarted.

The LICENSE_METRIC table records the number of concurrent users for each product license. You can check tables by using the Database Query object of the Administrator Console. The LICENSE_METRIC table takes a snapshot every 10 minutes. The amount of data in the table is normally small. If you want to trim the table, consult your security administrator about your information retention policy.

Agent configuration tables

The Agent Startup and Agent Registry tables contain the details that help you to configure the process agents in IBM TRIRIGA.

The configuration that determines the starting of agents is stored in the AGENT_STARTUP table of the IBM TRIRIGA database.

When a request to start an agent is made, an entry is added to the AGENT_REGISTRY table. When an agent stops, its status in the registry is updated. The Agent Registry table is available to all servers in the installation and is the source of the current activity information that is displayed in the Agent Manager object.

When the status of an agent changes, an INFO entry is written to the server log and contains information about the state transition, for example:

```
INFO  [com.tririga.platform.agent.AgentManager](http-0.0.0.0-8001-3) Start requested
 for CleanupAgent on server337.
INFO  [com.tririga.platform.agent.BaseAgentThread](CleanupAgent) CleanupAgent on ser
ver337 is now running.
INFO  [com.tririga.platform.agent.AgentManager](http-0.0.0.0-8001-3) Stop requested
for CleanupAgent on server337.
INFO  [com.tririga.platform.agent.BaseAgentThread](AgentHeartbeatThread) CleanupAgen
t on server337 is now stopped.
```

The `AGENTS_NOT_ALLOWED` property in the `TRIRIGAWEB.properties` file for a server identifies agents that cannot be started on that server. The Agent Manager does not allow a user to start an agent that is listed in the `AGENTS_NOT_ALLOWED` property for that server where the properties file resides. If a user tries to start an agent that is in the `AGENTS_NOT_ALLOWED` property, an INFO message is written to the server log and the agent is not started. If an entry in the `AGENTS_NOT_ALLOWED` property does not correspond to an existing agent, a warning message is written to the server log.

The Agent Startup table includes the agent type, the host name, and the configuration. The Agent Startup table is the source of the `TRIRIGAWEB.properties` information that is displayed in the Agent Manager.

If a single-instance agent is started while another instance of the same agent is running, the request fails, and a warning is written to the log file.

Threads management

To control the number of threads that are started for each agent, use the Threads Manager in the Administrator Console.

You can also use the Threads Manager to control the number of threads that are allocated to the IBM TRIRIGA CAD Integrator - Publisher (AutoCAD) when a drawing is attached. A single thread requires one connection to the database.

A large value for maximum threads can slow performance. A typical limit is no more than two to three times the core CPU count on the database. For example, if the database has two Dual Core Xeon CPUs, the core CPU count is four. The workflow agent has a maximum thread limit of eight, while the other agents have a maximum thread limit of two.

Workflow agents

Workflow agents pick up and process workflow events that are published by their designated users. You can designate IBM TRIRIGA application users for a workflow agent in the Workflow Agent Manager object of the Administrator Console.

The same user can be designated to multiple workflow agents. Priority is given to users that have an agent who is configured for them. You can restrict an agent to the user list, which prevents the agent from processing events that are posted by unassigned users. You can also reset the restricted user list settings, which allows you to remove settings for a server that is no longer in the current environment.

When an agent is configured for specific users, it picks up valid user events in the following order:

1. If the agent is configured exclusively for one or more users, it picks up valid events only for those users.
2. If the agent is configured for users non-exclusively, it picks up valid events for those users. If no event exists for a designated user, the agent picks up valid events for other users that do not have a designated agent.
3. If an agent is not configured for specific users, it picks up valid events for any user that is not on the user list of any other agent.

Valid events are events that satisfy the following conditions:

- The event is not currently being processed.
- No other event is being processed for the same record.
- The event is not for a user that already has the maximum number of events being processed by this agent.

Tip:

You run multiple workflow servers to allow workflow processing to be done in a manner that is fair to all users, not necessarily to increase the throughput of the number of workflows that are completed.

Adding more workflow agents to an environment can slow down processing, and cause undesirable results if workflows are not written with multi-threading in mind.

It is a best practice to assign secondary workflow agents to specific power users that tend to run more workflows than normal users. If the secondary workflow agents are left wide open, a set of workflow instances are picked up in parallel, and some can be processed out of order. Increasing the number of threads on a single process server results in higher throughput than splitting the threads across two servers. Typically, the bottleneck of performance in an environment is the database server rather than the process servers.

If you already have a system that is deployed with multiple workflow agents, consider either stopping the secondary agents and increasing the threads on the primary workflow agent server to be the sum of the threads across the other servers, or restricting the secondary agents so that they are exclusive for the set of power users.

Managed processes

The Managed Processes object in the Administrator Console shows all BIRT reporting processes that are currently running on the application server. The Managed Processes object can help you to identify reports that are using too much memory and to stop those reports.

The memory threshold is periodically checked while a report is running. If the reporting process meets the memory threshold, the system tries to stop the process. The memory threshold and the frequency with which the memory is checked are configurable in the `TRIRIGAWEB.properties` file.

You might check the Managed Process object if the system is slow or if your users are waiting a long time for a report. You might also use the Managed Process object to determine how long a report runs, and whether performance improvements are required. From the Managed Process object, you can attempt to stop a report that is running for a long time.

Large BIRT reports require many resources and can cause system problems. When a report is stopped due to lack of memory, the details about the report are logged. A report might fail when resources are low, which means that a failed report is not necessarily a poorly performing report. However, if a report consistently appears in the log, it is likely that performance can be improved.

Chapter 4. Administering DataConnect jobs

The DataConnect object in the Administrator Console displays business objects that have DataConnect staging tables. You can also use the DataConnect object to manage DataConnect jobs.

Business objects with staging tables

DataConnect tasks interpret data from external sources and places the data into staging tables. In the DataConnect object of the Administrator Console, you can view the business objects that have staging tables.

These business objects can be used in a DataConnect task to move data or update data from an external source.

When you expand the data, you can view the fields that are part of the staging table. These fields are shown in the format *IBM TRIRIGA field name-Database field name*, for example, `triPaidByParentLevel0TX-triPaidByParentLevel2`. Field definitions are useful for identifying the corresponding staging table fields for inbound data.

DataConnect jobs

DataConnect jobs are set up outside of IBM TRIRIGA, for example, in the Integration object. The DataConnect agent checks for ready jobs in the DC_JOB table.

In the Administrator Console, in the DataConnect object, you can manage existing DataConnect jobs. If a job is in the ready state, that job is run during the next DataConnect agent cycle. You can place a new job into the ready state by clicking **Ready Job**.

If the workflow completes but the job does not complete, the job is placed in a waiting or processed state, and you can fail that job. A failed job is not deleted but can be placed into the ready state by clicking **Retry Job**.

When you delete a job, both the job and its staging table entries are deleted, and the job cannot be tried again. You cannot delete a job that is being processed.

When you force a cleanup, obsolete and completed jobs are deleted if they are older than a specified number of days. This number of days is set in the `DC_HISTORY_RETENTION_DAYS` property of the `TRIRIGAWEB.properties` file.

Chapter 5. Administering logs

Several tools in the Administrator Console facilitate the management of logs in IBM TRIRIGA Application Platform. You can use the Platform Logging object to enable real-time debug-level logging for platform features. You can use the Error Logs object to view a summary of errors that occurred, including database errors and major exceptions.

Platform logging

If you need to troubleshoot system problems, you can enable debug-level logging at real time. For example, if workflows are slow, you can enable debugging for the workflow logs.

You set logging level in the Administrator Console, in the Platform Logging object. You can then test and analyze performance, such as extended formula performance, query performance, and workflow performance. Any changes that are made in the Platform Logging object are kept in temporary memory. When the server is restarted, the system reverts to the `log4j.xml` configuration settings.

You can roll most of the log files, which renames the current log file with the current date and time, and starts a new log file.

You can add your own custom log categories in the `CustomLogCategories.xml` configuration file that is in the `config` folder of the IBM TRIRIGA installation, for example, `C:\Tririga\config\CustomLogCategories.xml`.

Checking the performance timing logs

As an administrator or application developer, you want to know why performance is slow. You can check the performance timings in the Platform Logging object of the Administrator Console.

About this task

To enhance the analysis of the performance timings information, limit the number of users while you test.

Procedure

1. In the Administrator Console, open the Platform Logging object.
2. In the right pane, under the Performance Timings category, select the objects whose performance you want to test.
3. If you need multiple steps, in the **Write to log** field, add a time stamp to the log file.
4. In the Logging Actions section, click **Apply**.

Results

All options that you select are saved in a tab-delimited file called `performance.log`.

What to do next

You can import the information into a spreadsheet or database, and analyze this data. For example, you can sort the spreadsheet columns by duration, and view the longest-running queries.

The server log file

The `server.log` file contains messages that can help you to debug your system. A message in the log file can be an error, a warning, an information-only message, or a debug message. You can configure the level of information you see in this log by using the **log4j** command for your server.

Because of the large volume of information you might encounter in a log, do not set logging to debug level in run time.

The segments in the `server.log` file can be followed by a Java stack trace. These lines in the `server.log` file begin with `at com.tririga...`.

Data Modeler error messages

The `server.log` file contains error messages that relate to the Data Modeler.

State does not exist in BO

Log Type: Exception Header

```
ERROR com.tririga.platform.metadata.MetadataNotFoundException:
No state named '$$$' exists on this Business Object:
```

Resolution area

Data Modeler

Issue A state is found in the metadata that was removed from the system.

Suggested action

In the Data Modeler, review the business object in question. Revise and republish the business object to synchronize the metadata.

Example

The 'new' state was removed from the system and is now invalid.

```
ERROR
[com.tririga.design.web.process.smartrecord.SmartSectionActions]
com.tririga.platform.metadata.MetadataNotFoundException:
No state named 'new' exists on this Business Object:
BoImpl[name=cstTestBusinessObject,id=10003454,module=ModuleImpl
[name=Test Module,id=21218]]
```

Years cannot be negative

Log Type: Exception Header

```
ERROR DurationException: Years cannot be negative.
```

Resolution area

Data Modeler

Issue The end date is before the start date, or the end date is null.

Suggested action

Find the duration formula and look for the start date and end date values.

Example

```
ERROR
[com.tririga.architecture.util.Duration]
EXCEPTION com.tririga.architecture.util.DurationException:
Years cannot be negative.
```

Dependency of field not found

Log Type: Exception Header

```
WARN A dependency of this field could not be found:
```

Resolution area

Data Modeler

Issue A formula on a business object is not properly stated.

Suggested action

Identify the business object and field, update the formula in Data Modeler, and republish the business object.

Example

The formula for the **triContractPaymentsNU** field, on the triRealEstateContract business object, in the triContract module, does not evaluate.

```
WARN
[com.tririga.platform.metadata.domain.BoImpl]
A dependency of this field could not be found:
BoFieldImpl[name=triContractPaymentsNU,id=2373,Section=BoSectionImpl
[name=RecordInformation,id=BoSectionId[categoryId=1,subCategoryId=8],
Business Object=BoImpl[name=triRealEstateContract,id=10002490,module=
ModuleImpl[name=triContract,id=21]]]][MID-3164363956]
```

Formula for field not parsed

Log Type: Exception Header

```
Applying default formula. Could not parse formula for field:
```

Resolution area

Data Modeler

Issue A formula on a business object is not properly stated.

Suggested action

Identify the business object and field, update the formula in Data Modeler, and republish the business object.

Example

The formula for the **triFasbPVofRentNU** field, on the triRealEstateContract business object, in the triContract module, does not evaluate.

```
WARN
[com.tririga.platform.metadata.domain.BoFieldImpl]
Applying default formula. Could not parse formula for field:
BoFieldImpl[name=triFasbPVofRentNU,id=2375,Section=BoSectionImpl
[name=RecordInformation,id=BoSectionId[categoryId=1,subCategoryId
=8],Business Object=BoImpl[name=triRealEstateContract,id=10002490,
module=ModuleImpl[name=triContract,id=21]]]][MID-2514886854]
```

Error getting field for SO

Log Type: Exception Header

```
WARN Error getting field for SO - field not found.
```

Resolution area

Data Modeler or Form Builder

Issue Fields cannot be loaded for a business object, because the field metadata does not exist. A business object has a defined field, but that field does not exist in the system.

Suggested action
Remove the field from the business object. Review all mappings and forms for that business object. Revise and republish the necessary objects.

Example
The triCommunicationRecord business object has a **cstMatchedSAMTX** field that is invalid.

```
WARN
[com.tririga.design.smartobject.dataaccess.SmartObjectAttributeDAOAnsi]
Error getting field for SO - field not found.
Section='RecordInformation' Field='cstMatchedSAMTX' From SO ID='4895427'
name='null' BO name='triCommunicationRecord' id=10004546, Module id=20820
 [MID-3333779126]
```

Error processing GUI metadata mapping

Log Type: Exception Header

```
WARN Error processing GUI Metadata mapping.
```

Resolution area
Data Modeler or Form Builder

Issue The Form field does not exist for a form mapping, or a form mapping references a field on a business object that does not exist.

Suggested action
To remove the field from the form mapping, revise and republish the form. If multiple forms exist for a business object, review the workflow and ensure that the business process is followed for the proper forms.

Example
In the `cstTicket - Synchronous - OnChange` workflow, during the `Do Not Require Steps to Reproduce` task, the form is not updated because the **Steps to Reproduce** field does not exist.

```
WARN
[com.tririga.platform.workflow.template.guimetamap.GUIFieldMap]
Error processing GUI Metadata mapping. WFTaskStepImpl.WFTaskStepRO[137224,
Do Not Require Steps to Reproduce,Modify Metadata,23,
WFTemplateImpl.WFTemplateRO[ID=14565895,Version=5,Name=cstTicket
- Synchronous - OnChange Type]]. MapEntryBase[mapId=137224,wfTemplateId=
14565895,wfTemplateVersion=5,guiTabName=NewGeneral,guiSectionName=General,
guiFieldName=Steps to Reproduce,propertyValue=false,taskMapData=<null>,
initialized=true]. Caused by: com.tririga.platform.metadata.
MetadataException: No field id found with name: Steps to Reproduce.
Section: General Tab: NewGeneral GUI Name: HelpDeskTicket[MID-1004518520]
```

Failed to obtain metric category

Log Type: Exception Header

```
WARN Failed to obtain a list of triMetricCategory from application metadata
repository. This error indicates the platform version is ahead of the appli
cation version. The system is expecting the new metadata structure that does
 not exist in the current application version.
```

Resolution area
Data Modeler

Issue The Report Manager can run metric reports, but the application does not include the business objects that are required to support the functionality.

Suggested action

When you want to implement IBM TRIRIGA Workplace Performance Management, upgrade the application to 9.6 or higher. If you are not using IBM TRIRIGA Workplace Performance Management, this warning can be ignored.

Example

```
WARN
[html.en.default.reportTemplate.reportTemplateDesc]
Failed to obtain a list of triMetricCategory from application metadata
repository. This error indicates the platform version is ahead of the
application version. The system is expecting the new metadata structure
that does not exist in the current application version.[MID-2565267038]
```

Conflict of object names

Log Type: Exception Header

```
WARN Name of object being saved conflicts with existing object. Name: ''.
```

Resolution area

Data Modeler

Issue The user attempted to save a record that has the same unique name as an existing record.

Suggested action

Identify the business object with conflicts and validate the unique identifier that is used for the mapped name is valid. If not, update the mapped name and republished the business object. This update does not change the names of existing records. Review the workflows that create records for the business object and ensure that the proper data is mapped into the create task for the record to be uniquely identified when the record is created.

Example

A record for the cstBidDocument business object in the Bid module is saved with the name ''.

```
WARN
[com.tririga.platform.smartobject.service.BaseSmartObjectService]
Name of object being saved conflicts with existing object. Name: ''.
Existing object: SmartObjectImpl[ID=10650471,Business
Object=BoImpl[name=cstBidDocument,id=10003095,
module=ModuleImpl[name=Bid,id=35]]] New object being saved:
SmartObjectImpl[ID=13120040,Business Object=BoImpl[name=cstBidDocument,
id=10003095,module=ModuleImpl[name=Bid,id=35]]][MID-317597477]
```

No business object mapping found

Log Type: Exception Header

```
WARN No BO Mapping (IBS_SPEC_TYPE_FIELD_MAP) found for BO:
```

Resolution area

Data Modeler

Issue A business object is defined but might not be in a valid published state.

Suggested action

Identify and republish the business object.

Example

```
WARN
[com.tririga.platform.metadata.dataaccess.BoDaoImpl]
No BO Mapping (IBS_SPEC_TYPE_FIELD_MAP) found for BO:
BoImpl[name=Inbox Folder,id=103516,module=ModuleImpl[name=Mail,id=17]]
This is typically required in order for a BO to be published.
[MID-1159340835]
```

Not adding field to section

Log Type: Exception Header

```
WARN Not adding field with name '$$$' to section :
```

Resolution area

Data Modeler

Issue A business object has a field that is not linked with a database column.

Suggested action

Identify the business object and field. Revise and republish the business object.

Example

The Bid Response Analysis Line Item business object cannot handle the **DM_FILE_NAME** field in the Documents section.

```
WARN
[com.tririga.platform.metadata.dataaccess.BoDaoImpl]
Not adding field with name 'DM_FILE_NAME' to section :
BoSectionImpl[name=Documents,id=BoSectionId[categoryId=2,subCategoryId=1],
Business Object=BoImpl[name=Bid Response Analysis Line Item,id=10000045,mo
dule=ModuleImpl[name=Line Item,id=27]]] Reason: Field, 'DM_FILE_NAME' is n
ot backed by a database field.[MID-1778354461]
```

UOM source is not UOM managed.

Log Type: Exception Header

```
WARN The UOM Source for this field is not UOM Managed.
```

Resolution area

Data Modeler

Issue A field is identified to have a Unit of Measure source field, but the source field does not store units of measure.

Suggested action

Identify the business object and field, update the UOM Source in Data Modeler, and republish the business object.

Example

The formula for the **triDefaultCapacityNU** field, on the triSpace business object, in the Location module, does not evaluate because one of the fields used as a source UOM (**triCapacityNU**) does not store UOM.

```
WARN
[com.tririga.platform.metadata.domain.BoFieldImpl]
The UOM Source for this field is not UOM Managed. This field:
BoFieldImpl[name=triDefaultCapacityNU,id=1188,
Section=BoSectionImpl[name=RecordInformation,id=BoSectionId[categoryId=1,
subCategoryId=6],Business Object=BoImpl[name=triSpace,id=10002873,
module=ModuleImpl[name=Location,id=6]]]] UOM Source Field:
BoFieldImpl[name=triCapacityNU,id=1119,
Section=BoSectionImpl[name=RecordInformation,id=BoSectionId[categoryId=1,
subCategoryId=6],Business Object=BoImpl[name=triSpace,id=10002873,
module=ModuleImpl[name=Location,id=6]]]][MID-276069112]
```


Business object does not exist

Log Type: Exception Header

```
WARN triThreshold Business Object does not exist.
```

Resolution area

Data Modeler

Issue The Report Manager can run Metric Reports, but the application does not include the business objects that are required to support the functionality.

Suggested action

When you want to implement IBM TRIRIGA Workplace Performance Management, upgrade the application to 9.6 or higher. If you are not using IBM TRIRIGA Workplace Performance Management this warning can be ignored.

Example

```
WARN
[html.en.default.reportTemplate.reportTemplateDesc]
triThreshold Business Object does not exist.[MID-75369837]
```

Invalid locator metadata

Log Type: Exception Header

```
WARN Trouble setting the locator field because the locator metadata is
invalid; setting with the linked object's name instead.
```

Resolution area

Data Modeler or Workflow Builder

Issue The Data Modeler uses a field for a locator that is different from the field that is mapped into the field in a workflow.

Suggested action

Review the field that is used in the Data Modeler for the locator to ensure the proper mapping. Update and republish the mapping. Locator fields are sometimes used for multi-object mappings and this warning might be seen in this scenario and can be ignored.

Example

The Notification business object in the Mail module has a RefObject locator. The RefObject locator is mapped to the linked record name instead of the identified field from the Data Modeler. This warning can be ignored.

```
WARN
[com.tririga.platform.smartobject.domain.field.LocatorField]
(WFA-2.5:1837189 - 13119943 APPROVE_HIDDEN:14821226 IE=14821226)
Trouble setting the locator field because the locator metadata is invalid;
setting with the linked object's name instead.
Locator field: BoFieldImpl[name=RefObject,id=1021,
Section=BoSectionImpl[name=AdditionalDetail,id=BoSectionId[categoryId=1,
subCategoryId=6],Business Object=BoImpl[name=Notification,id=107324,
module=ModuleImpl[name=Mail,id=17]]]][MID-1263122157]
```

UOM source does not exist

Log Type: Exception Header

```
WARN UOM Source for field does not exist:
```

Resolution area

Data Modeler

Issue A field has a source units of measure (UOM) field that is defined, but the source field cannot be found.

Suggested action

Review the field and ensure that the proper UOM definitions exist. Revise and republish the business object.

Example

The **triLtBrokerageCommissionNU** field, on the triAssetLease business object, in the triContract module has an invalid UOM source.

```
WARN
[com.tririga.platform.metadata.domain.BoFieldImpl]
UOM Source for field does not exist:
BoFieldImpl[name=triLtBrokerageCommissionNU,id=1560,
Section=BoSectionImpl[name=RecordInformation,id=BoSectionId[categoryId=1,
subCategoryId=8],Business Object=BoImpl[name=triAssetLease,id=10008550,
module=ModuleImpl[name=triContract,id=21]]]] This is being allowed for
backward compatibility, but will likely cause issues in further processing.
The Business Object Field should be fixed to point to a valid UOM Source.
[MID-769296686]
```

Missing expression

Log Type: Exception Header

```
WARN Expression is missing for . boId = ###### Field = ####
```

Resolution area

Data Modeler

Issue An extended formula is indicated but is not defined, or a variable is not defined.

Suggested action

Use the SQL statements to identify the business object and field:

```
select * from ibs_spec_type where spec_template_id=######;
```

Update and publish.

triTimeZonesCL field does not exist

Log Type: Exception Header

```
WARN com.tririga.platform.smartobject.InvalidFieldRequestException:
No field named 'triTimeZonesCL' exists on this Business Object in the
general sections:
```

Resolution area

Data Modeler

Issue An application is attempting to use the scheduling custom tasks in workflow, but the calling business object does not have the **triTimeZonesCL** field, which is required to properly use the functionality.

Suggested action

Revise the identified business object and add the **triTimeZonesCL** field.

Example

The cstTimeCalculator business object in the triHelper module is missing the **triTimeZonesCL** field.

```
WARN
[com.tririga.architecture.web.process.reserve.ReserveUtils]
com.tririga.platform.smartobject.InvalidFieldRequestException: No field
named 'triTimeZonesCL' exists on this Business Object in the general
sections:BoImpl[name=cstTimeCalculator,id=10005047,
module=ModuleImpl[name=triHelper,id=21720]]
```


No value found single lookup

Log Type: Exception Header

```
WARN No value found in single lookup
```

Resolution area

Data Modeler

Issue An HTML form report attempted to access a field that does not exist in the underlying business object.

Suggested action

Edit the HTML form, look for the section and field name that is referenced in the error, and correct the field.

Example

```
WARN
No value found in single lookup using XPathExpr:
'//Project-Project-RecordedBy//PeopleFullName'
```

Workflow builder error messages

The `server.log` file contains error messages that relate to the Workflow Builder.

No hit for workflow template

Log Type: Exception Header

```
INFO  (WFA:3340769 - 5712774 cstProvisionalBooking:27648718) No hit
in cache for Workflow Template ID: 14313328. In order to get the cache
current, restart your app server.
```

Resolution area

Workflow Builder

Issue A workflow was retired but is still being called.

Suggested action

Find workflow by using the ID that is used in the metaschema:

```
Select * from wf_lookup where wf_template_id='#####';
```

Revise and publish the workflow.

Example

The Workflow Template ID indicates which workflow is being called.

```
INFO
[com.tririga.architecture.cache.WFCache]
(WFA:3340769 - 5712774 cstProvisionalBooking:27648718) No hit in cache
for Workflow Template ID:  14313328. In order to get the cache current,
restart your app server.
```

Workflow task error

Log Type: Exception Header

```
WARN Call workflow task encountered error.
```

Resolution area

Workflow Builder

Issue A workflow does not exist or is not currently published.

Suggested action

Review the calling workflow and see whether the step is still necessary, or find out why the called workflow is missing. Make sure that the called workflow is currently published. Revise and republish the necessary workflows.

Example

```
Call workflow task encountered error. Task:  TaskStep:
 Call Workflow(38) WFTID=19118076.14 TSID=205820
 Label='Call a Subflow' EventAction='',
 Calling WF: ID: 19118075  Version: published,
  Exception: com.tririga.platform.workflow.template.exception.
WFTemplateLoadingException:
  Problem loading Workflow Template for ID: 19118075 Version:
published....
 Caused by: com.tririga.platform.workflow.template.exception.
WFTemplateNotFoundException:
  Workflow template not found in lookup table for ID: 19118075
...
  Caused by: org.springframework.dao.EmptyResultDataAccessException:
   Incorrect result size: expected 1, actual 0
```

Cannot reverse financial transaction

Log Type: Exception Header

```
WARN CANNOT REVERSE PREVIOUS TRANSACTIONS
```

Resolution area

Workflow Builder

Issue An application is attempting to use the financial transaction function to reverse previous financial transactions. A financial reference object is not associated with the record, so the object is unable to find previous transactions to reverse.

Suggested action

Review the process and ensure that when the financial transaction is being processed it has a financial reference object.

Example

The financial transaction record 13119972 does not have a financial reference object.

```
WARN
[com.tririga.platform.finance.service.FinanceServiceImpl]
(WFA-2.5:1837189 - 13119943 De-Associate:14821223 IE=14821223)
CANNOT REVERSE PREVIOUS TRANSACTIONS:  This financial transaction,
13119972, is not associated to an object so no previous transactions
can be reversed.
```

Error evaluating condition expression

Log Type: Exception Header

```
WARN Error evaluating condition expression - returning FALSE.
```

Resolution area

Workflow Builder

Issue Switch conditions cannot be loaded, because they are invalid.

Suggested action

Revise the workflow. Review and update the conditions. Republish the workflow.

Example

The workflow cstBidDocument - onChange - Update UOM has an invalid Switch condition.

```
WARN
[com.tririga.platform.workflow.runtime.condition.Condition]
Error evaluating condition expression - returning FALSE.
Condition[ID=55383,Expr='substring (p0 , 10 , 10 ) == "A" ||
substring (p1 , 10 , 10 ) == "H" || substring (p2 , 10 , 10 ) == "G"
```



```
|| substring (p3 , 10 , 10 ) == "L"',Parameters=[p0 = , p1 = , p2 = ,
p3 = ]]. Workflow Info: WFTemplateImpl.WFTemplateRO[ID=18749944,
Version=2,Name=cstBidDocument - onChange - Update UOM], TaskStep:
WFTaskStepImpl.WFTaskStepRO[135720,,Switch,14,
WFTemplateImpl.WFTemplateRO[ID=18749944,Version=2,
Name=cstBidDocument - onChange - Update UOM]][MID-739830450]
```

Mapping into target field not allowed

Log Type: Exception Header

```
Mapping into the target field is not allowed because the field is
within a Live Link section.
```

Resolution area

Workflow Builder

Issue A field is being mapped into a live link section. Only the section mapping is used for a live link section.

Suggested action

Revise the workflow, open the task, open the workflow map, clear the field map for the live link section, and save workflow map. Publish the workflow.

Example

Workflow ID 10014934 version 17 has an invalid section map to the Line Item Summary History business object for the RecordedBy section.

```
WARN
[com.tririga.platform.workflow.template.sofieldmap.MapEntry]
Mapping into the target field is not allowed because the field is
within a Live Link section.
The mapping is being discarded.MEFieldToField[MapEntry Field-to-Field,
Type=10,SrcField=1037,TgtField=1037,Map=SOFieldMapImpl.
SOFieldMapRO[ID=1968,WFTemplate=10014934.17]]. TARGET:
BoFieldImpl[name=StateProv,id=1037,
Section=BoSectionImpl[name=RecordedBy,id=BoSectionId[categoryId=1,
subCategoryId=7],Business Object=BoImpl[name=Line Item Summary
History,id=10000072,module=ModuleImpl[name=Line Item,id=27]]]]
[MID-3898920414]
```

Invalid locator metadata

Log Type: Exception Header

```
WARN Trouble setting the locator field because the locator metadata
is invalid; setting with the linked object's name instead.
```

Resolution area

Data Modeler or Workflow Builder

Issue The Data Modeler uses a field for a locator that is different than the field that is being mapped into the field in a workflow.

Suggested action

Review the field used in the Data Modeler for the locator to ensure the proper mapping. Update and republish the mapping. Locator fields are sometimes used for multi-object mappings, and this warning may be seen in this scenario and can be ignored.

Example

The Notification business object in the Mail module had a RefObject locator. The RefObject locator is mapped to the linked record name instead of the identified field from the Data Modeler. This warning can be ignored.

```
WARN
[com.tririga.platform.smartobject.domain.field.LocatorField]
(WFA-2.5:1837189 - 13119943 APPROVE_HIDDEN:14821226 IE=14821226)
Trouble setting the locator field because the locator metadata
is invalid; setting with the linked object's name instead.
Locator field: BoFieldImpl[name=RefObject,id=1021,
Section=BoSectionImpl[name=AdditionalDetail,
id=BoSectionId[categoryId=1,subCategoryId=6],
Business Object=BoImpl[name=Notification,id=107324,
module=ModuleImpl[name=Mail,id=17]]]][MID-1263122157]
```

Workflow SmartObject field mapping

Log Type: Exception Header

```
WARN Workflow SmartObject field mapping.
```

Resolution area

Workflow Builder

Issue A field or section in a workflow field mapping does not exist in the underlying business object.

Suggested action

Revise the workflow. Open the task. Open, review, and save the workflow map. Publish the workflow.

Example

Workflow ID 10328588 version 3, task Modify Records, has an invalid section map for the Team Members section into the Capital Project business object in the Project module.

```
WARN
[com.tririga.platform.workflow.template.sofieldmap.SOFieldMapImpl]
Workflow SmartObject field mapping.
MEObjectToSection[MapEntry Object-to-Section,Type=30,
TgtSectionCatagory=12,TgtSectionSubCatagory=1,TgtField=1,
Map=SOFieldMapImpl.SOFieldMapRO[ID=10853,WFTemplate=10328588.3]].
Mapping FROM: BoImpl[name=External Contact,id=106849,
module=ModuleImpl[name=People,id=7]],
TO: BoImpl[name=Capital Project,id=107010,
module=ModuleImpl[name=Project,id=19]].
TaskStep: Modify Records(28) WFTID=10328588.3 TSID=133061
Label='Modify Records' EventAction='Append'.
Cause: com.tririga.platform.metadata.MetadataNotFoundException:
No section with name 'Team Members' exists on this Business Object:
BoImpl[name=Capital Project,id=107010,
module=ModuleImpl[name=Project,id=19]][MID-3776864463]
```

Workflow task handler error

Log Type: Exception Header

```
WARN Workflow task handler error while triggering action
```

Resolution area

Workflow Builder

Issue A state transition is performed that is not valid for the current state of the record on which the workflow is running.

Suggested action

Review the business object in question and check that the action or transition is still there. If the state transition is not there, you can add the state transition, and revise and republish the business object. If the state transition is there, the workflow might be called on a record that is not in an appropriate state for this transition to occur. Review your processes to ensure that records are in the proper state before the workflow runs.

Example

In the xxx workflow, the cstCalculateEnd task, the workflow is trying to run the cstCalculateEnd state transition. The cstCalculateEnd state transition is not a valid transition from the current state of the record.

```
WARN
Workflow task handler error while triggering action 'cstCalcuateEnd'.
TaskStep: Trigger Action(31) WFTID=16680680.10 TSID=138571
Label='cstCalculateEnd' EventAction='cstCalcuateEnd'.
Cause: com.tririga.platform.metadata.MetadataNotFoundException:
No transition exists on this Business Object from current state
'BoStateImpl[Name=triActive,Business
Object=BoImpl[name=cstTimeCalculator,id=10005047,
module=ModuleImpl[name=triHelper,id=21720]]]'
with transition name of 'cstCalcuateEnd'.
```

Database error messages

The `server.log` file can contain error messages that relate to databases, such as DB2®, Oracle, and SQL Server.

DB2 SQL error example

Log Type: Exception Header

```
WARN/ERROR DB2 SQL Error: SQLCODE=### SQLSTATE=#####
```

Resolution area

DB2database

Issue An SQL exception was encountered. The value of SQLCODE is based on the cause of the exception.

Suggested action

Examine the message in the `server.log` and find the line that starts with `SQLCODE`. To determine the cause, look up the SQLCODE in the online documentation for your DB2 version. The issues can be varied, from being out of space to invalid SQL.

Example 1

This code indicates that the database has run out of space in the file system:

```
2014-07-02 21:07:15,498 ERROR
[com.tririga.architecture.workflow.dataaccess.
WFTemplateDAO](http-0.0.0.0-8001-4)
com.ibm.db2.jcc.am.SqlIntegrityConstraintViolationException: DB2 SQL Error:
SQLCODE=-289 SQLSTATE= 57011

Search for SQLCODE=-289 SQLSTATE=57011
```

The DB2 error code `-289` indicates that the database has run out of space on the file system.

Example 2

In this example, the S_POLINE business object and its staging table do not exist.

```
2014-07-02 12:14:55,759 ERROR
[com.tririga.platform.admin.dataaccess.
DBScriptRunnerDAOImpl](http-0.0.0.0-8001-3)
com.ibm.db2.jcc.am.SqlSyntaxErrorException: DB2 SQL Error: SQLCODE=-204,
SQLSTATE=42704, SQLERRMC=TRIDATA.S_POLINE, DRIVER=4.16.24
com.ibm.db2.jcc.am.SqlSyntaxErrorException: DB2 SQL Error: SQLCODE=-204,
SQLSTATE=42704, SQLERRMC=TRIDATA.S_POLINE, DRIVER=4.16.24

Search for SQLCODE=-204 SQLSTATE=42704
Object does not exist.
```

Other error messages in the server log file

The `server.log` file contains error messages that relate to Form Builder, Report Manager, user error, HTTP protocols, and currency conversion.

DataConnect errors

See the Possible Errors section in the DataConnect chapter of *Application Building for the IBM TRIRIGA Application Platform 3: Data Management*.

WFA:3340769 - 2289501

Log Type: Exception Header

```
(WFA:3340769 - 2289501 Associate:26451634)
```

Issue This information can be included in any error.

Suggested action

Decode the error snippet.

Example

```
(WFA:3340769 - 2289501 Associate:26451634)
```

To locate the information in the database, use the following SQL:

```
select * from user_credentials where user_id=3340769;
select * from ibs_spec where spec_id=2289501;
select * from wf_event where event_id=26451634;
```

If no rows are returned, try the following SQL:

```
select * from wf_event_history where event_id=26451634;
```

Invalid Object ID for dispatch

Log Type: Exception Header

```
ERROR Invalid Object Id specified for dispatch. Object Id was null.
```

Resolution area

User training

Issue User clicked inside a window before the Java™ code finished loading.

Suggested action

Users need to wait for the Java to load before they click inside a window.

Example

```
ERROR
[com.tririga.web.process.ProcessRouter]
Invalid Object Id specified for dispatch. Object Id was null.
```

HTTP protocol error

Log Type: Exception Header

```
INFO - [com.tririga.web.filter.AuthenticationFilter]
```

Resolution area

HTTP protocol

Issue A user process caused an issue with IBM TRIRIGA HTTP security. For example, the user might navigate to a link when not logged in or when a session is expired. Causes might include timeout or attempting to log in more than once with the same user account.

Suggested action

Log back in to the IBM TRIRIGA application and go through the steps that were followed before this error.

Example

A request was made for `templateScriptsCached.jsp` through some process but the session expired and the page is no longer accessible.

```
INFO
[com.tririga.web.filter.AuthenticationFilter]
(http-0.0.0.0-8001-2) Error in AuthenticationFilter:
requestURL(/html/en/default/js/templateScriptsCached.jsp)
is not part of the excluded filters, userId is less than one,
HttpRequestHeader=[host=localhost:8001, user-agent=Mozilla/5.0
(Windows; U; Windows NT 5.1; en-US; rv:1.9.0.8) Gecko/2009032609
Firefox/3.0.8, accept=*/*, accept-language=en-us,en;q=0.5,
accept-encoding=gzip,deflate, accept-charset=ISO-8859-1,utf-8;
q=0.7,*;q=0.7, keep-alive=300, connection=keep-alive, referer=http://
localhost:8001/html/en/default/common/sessionExpirationGeneral.jsp,
cookie=JSESSIONID=yWl4MJ9suRDqAFS7PLANFw**, ]
```

Cannot parse parameter in formula

Log Type: Exception Header

```
WARN Could not parse parameter in formula:
```

Resolution area

Report Manager

Issue An extended formula is trying to use a query to resolve a parameter, but the query or field in the query cannot be found.

Suggested action

Add the query or the field to the query.

Example

An extended formula is attempting to use the query `triInvoiceLineItem - Advanced Formula - triPaid - Associated to Current Record`, in the **triNewInvTotalNU** field.

```
WARN
[com.tririga.platform.smartobject.util.formula.ExtendedFormulaParser]
Could not parse parameter in formula:
ExtendedFormulaDefnImpl[Formula=b,Parms={b=ExtendedFormulaParmDefnImpl
[Name=b,Value=[QUERY][{triCostItem}{triInvoiceLineItem}
{triInvoiceLineItem - Advanced Formula - triPaid - Associated to
Current Record   }][{RecordInformation}{triNewInvTotalNU}]]}]
[MID-2164297393]
```

GUI field has a different field type than business object

Log Type: Exception Header

```
Gui field has a different field type than backing bo.
Using field type of BO.
```

Resolution area

Form Builder

Issue A form has a field that no longer exists.

Suggested action

Identify the forms for the business object that uses the listed field. Revise the form. In Form Builder, remove the field from the tree view of the form layout. Add the field back to the form. Publish the form.

Example

The **Note** field, on the triBSIFailureImpactA business object, is identified as a text field in a form but another field type in the Data Modeler.

```
WARN
[com.tririga.platform.error.ErrorHandler]
Gui field has a different field type than backing bo.
Using field type of BO.
BO=[name=triBSIFailureImpactA, id=10003740]
FieldType=[BoField=Note, GuiFieldType=Text][MID-4251286743]
```

Backing business object field does not exist

Log Type: Exception Header

```
WARN Not adding field, '$$$', to GUI Section because backing
Business Object field does not exist:
```

Resolution area

Form Builder

Issue A form has a field that no longer exists.

Suggested action

Identify the form and field. Revise the form. In Form Builder, remove the field from the tree view of the form layout. Add the field back to the form. Publish the form.

Example

The **Active Start Date** field, on the **Key** GUI, **General** tab, KeySpecification section, is invalid.

```
WARN
[com.tririga.platform.metadata.dataaccess.GuiMetadataDaoImpl]
Not adding field, 'Active Start Date', to GUI Section because
backing Business Object field does not exist:
GuiSectionMetadataImpl[Name=KeySpecification,ID=11,GUI
Tab=GuiTabMetadataImpl[Name=General,ID=1,
GUI=GuiMetadataImpl[Name=Key,ID=10000083]]][MID-1871134927]
```

Invalid query filter

Log Type: Exception Header

```
WARN Not using invalid query filter:
```

Resolution area

Report Manager

Issue A query has a filter for a field that does not exist.

Suggested action

Identify the query and filter. In Report Manager, remove the filter. Save the query.

Example

The filter for the **triPaidDA** field, on the `triPaymentLineItem - Display - Received Accounts Receivable records associated as Has Payment` query, in the triCostItem module, is invalid.

```
WARN
[com.tririga.platform.metadata.dataaccess.BoQueryMetadataDaoImpl]
Not using invalid query filter:
BoQueryFilterMetadataImpl[Left side section=RecordInformation,
Left side field=triPaidDA,Operator=Equals,Right side
value=$$RUNTIME$$,Query=BoQueryMetadataImpl[ID=19845,
Name=triPaymentLineItem - Display - Received Accounts Receivable
records associated as Has Payment,Module=triCostItem]] Caused by:
```



```
No field named 'triPaidDA' exists on this Business Object in the
general sections: BoImpl[name=triPaymentLineItem,id=10004638,
module=ModuleImpl[name=triCostItem,id=27]][MID-2170122156]
```

triTesting column does not exist

Log Type: Exception Header

```
WARN Adding DB column, triTesting, since it does not exist and
the BO expects it to be there.
```

Issue This warning is logged during a publish.

Suggested action

The message in the log entry indicates what needs to be enabled in order for that entry to exist.

Example

The example shows logging that occurs during a publish. To see the DEBUG events, enable the Business Object Publish option on the Platform Logging object in Administrator Console, on the server where the BO Publish Agent is running.

```
2008-12-04 13:44:23,037 INFO
[com.tririga.platform.metadata.service.BoPublishService](Thread
-17) Publish started for Business Object: BoImpl[name=testBo,id
=10043142,module=ModuleImpl[name=testModule,id=26323]]
2008-12-04 13:44:23,083 WARN
[com.tririga.platform.metadata.service.BoPublishService](Thread
-17)    Adding DB column, triTesting, since it does not exist a
nd the BO expects it to be there. Bo Field: BoFieldImpl[name=tr
iTesting,id=1001,Section=BoSectionImpl[name=General,id=BoSectio
nId[categoryId=1,subCategoryId=1],Business Object=BoImpl[name=t
estBo,id=10043142,module=ModuleImpl[name=testModule,id=26323]]]]
2008-12-04 13:44:23,083 DEBUG
[com.tririga.platform.metadata.service.BoPublishService](Thread
-17)    DDL Built: Sql[SQL=ALTER TABLE T_TESTBO ADD (TRITESTING
 VARCHAR(150))] for Business Object: BoImpl[name=testBo,id=1004
3142,module=ModuleImpl[name=testModule,id=26323]]
2008-12-04 13:44:23,755 INFO
[com.tririga.platform.metadata.service.BoPublishService](Thread
-17) Publish completed for Business Object: BoImpl[name=testBo,
id=10043142,module=ModuleImpl[name=testModule,id=26323]]
2008-12-04 13:44:23,771 INFO
[com.tririga.platform.metadata.service.BoPublishService](Thread
-17) Publish started for Module: ModuleImpl[name=testModule,id=
26323]
2008-12-04 13:44:23,927 DEBUG
[com.tririga.platform.metadata.service.BoPublishService](Thread
-17)    Union BO in to view: BoImpl[name=testBo,id=10043142,mod
ule=ModuleImpl[name=testModule,id=26323]]
2008-12-04 13:44:23,927 DEBUG
[com.tririga.platform.metadata.service.BoPublishService](Thread
-17)    Union BO in to view: BoImpl[name=testModule,id=10019042
,module=ModuleImpl[name=testModule,id=26323]]
2008-12-04 13:44:23,927 DEBUG
[com.tririga.platform.metadata.service.BoPublishService](Thread
-17)    DDL Built: Sql[SQL=DROP VIEW M_TESTMODULE] for Module:
ModuleImpl[name=testModule,id=26323]
2008-12-04 13:44:23,927 DEBUG
[com.tririga.platform.metadata.service.BoPublishService](Thread
-17)    DDL Built: Sql[SQL=CREATE VIEW M_TESTMODULE AS SELECT S
PEC_ID SPEC_ID, SYS_PROJECTID SYS_PROJECTID, SYS_OBJECTSTATE SY
S_OBJECTSTATE, SYS_OBJECTID SYS_OBJECTID, SYS_GUIID SYS_GUIID,
Sys_OrgName Sys_OrgName, Sys_OrgNameObjId Sys_OrgNameObjId, Sys
_ModifiedTime Sys_ModifiedTime, Sys_PriorState Sys_PriorState,
Sys_CreatedBy Sys_CreatedBy, LastName LastName, Sys_GeographyNa
me Sys_GeographyName, Sys_GeographyNameObjId Sys_GeographyNameO
```

```
bjId, Sys_GeographyId Sys_GeographyId, Sys_Type Sys_Type1, Sys_
ReviewStatus Sys_ReviewStatus, Sys_ModifiedBy Sys_ModifiedBy, t
riControlNumberCN triControlNumberCN, Sys_Parent Sys_Parent1, S
ys_OrganizationId Sys_OrganizationId, Sys_CreatedTime Sys_Creat
edTime, Sys_LocationName Sys_LocationName, Sys_LocationNameObjI
d Sys_LocationNameObjId, triTesting triTesting, Sys_LocationId
Sys_LocationId FROM T_TESTBO UNION ALL SELECT SPEC_ID SPEC_ID,
SYS_PROJECTID SYS_PROJECTID, SYS_OBJECTSTATE SYS_OBJECTSTATE, S
YS_OBJECTID SYS_OBJECTID, SYS_GUIID SYS_GUIID, Sys_OrgName Sys_
OrgName, Sys_OrgNameObjId Sys_OrgNameObjId, Sys_ModifiedTime Sy
s_ModifiedTime, Sys_PriorState Sys_PriorState, Sys_CreatedBy Sy
s_CreatedBy, LastName LastName, Sys_GeographyName Sys_Geography
Name, Sys_GeographyNameObjId Sys_GeographyNameObjId, Sys_Geogra
phyId Sys_GeographyId, Sys_Type1 Sys_Type1, Sys_ReviewStatus Sy
s_ReviewStatus, Sys_ModifiedBy Sys_ModifiedBy, triControlNumber
CN triControlNumberCN, Sys_Parent1 Sys_Parent1, Sys_Organizatio
nId Sys_OrganizationId, Sys_CreatedTime Sys_CreatedTime, Sys_Lo
cationName Sys_LocationName, Sys_LocationNameObjId Sys_Location
NameObjId, triTesting triTesting, Sys_LocationId Sys_LocationId
 FROM T_TESTMODULE] for Module: ModuleImpl[name=testModule,id=2
6323]
2008-12-04 13:44:24,037 INFO
[com.tririga.platform.metadata.service.BoPublishService](Thread
-17) Publish completed for Module: ModuleImpl[name=testModule,i
d=26323]
2008-12-04 13:44:24,037 INFO
[com.tririga.platform.metadata.bopublish.BoPublishAgent](Thread
-17) Sending notification to user:  [221931] Message: [Publicat
ion of testBo completed with warning(s).]
```


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