



## Batch Monitor

BatchMonitor.dnax  
Extension Id: eae5337b-ce91-4115-8149-fe74df085678

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**Overview:**

The Batch Application Monitor DNAapp is an online application that enables Financial Institutions to quickly and easily track and isolate batch application run-time performance, including trends and errors raised during the application runs. It is designed to both help monitor production batch processes, and also to help with testing new releases, system updates, hardware upgrades, and custom batch application to ensure overall DNA performance remains at a high level.

For example, a Financial Institution may load a new system update or release or hardware/database update, and is able to compare/contrast run times with the new release for a specific batch application vs. trends (say previous 30 times the application was run) to ensure the update will not cause issues. This provides an 'early warning system' to assess the system update and what batch applications may cause issues, and can be known very early on.

The DNAapp will also track logged errors making it easy for the User to determine which applications had errors for a given run cycle, or over a specified period. This is especially useful for custom batch applications to ensure they still work efficiently with all system upgrades.

**Key Benefits:**

The Batch Application Monitor DNAapp is especially useful for system updates and releases to see the effect on both existing and new batch applications.

Benefits include:

- Ability to quickly and easily track trends for batch applications, including average run times.
- Functionality to show errors for either a given batch application or a selected days' worth of batch applications.
- Fast assessment of the effect of a new release, system update, or hardware on performance available online, in real-time.

**Processing:**

To gain access to the Batch Application Monitor application, the User must first be given permissions for the existing Authorization item 'BATI -- Batch Inquiry'. The User should also review and set the appropriate values for the two new calculation variables for the Batch Application Monitor.

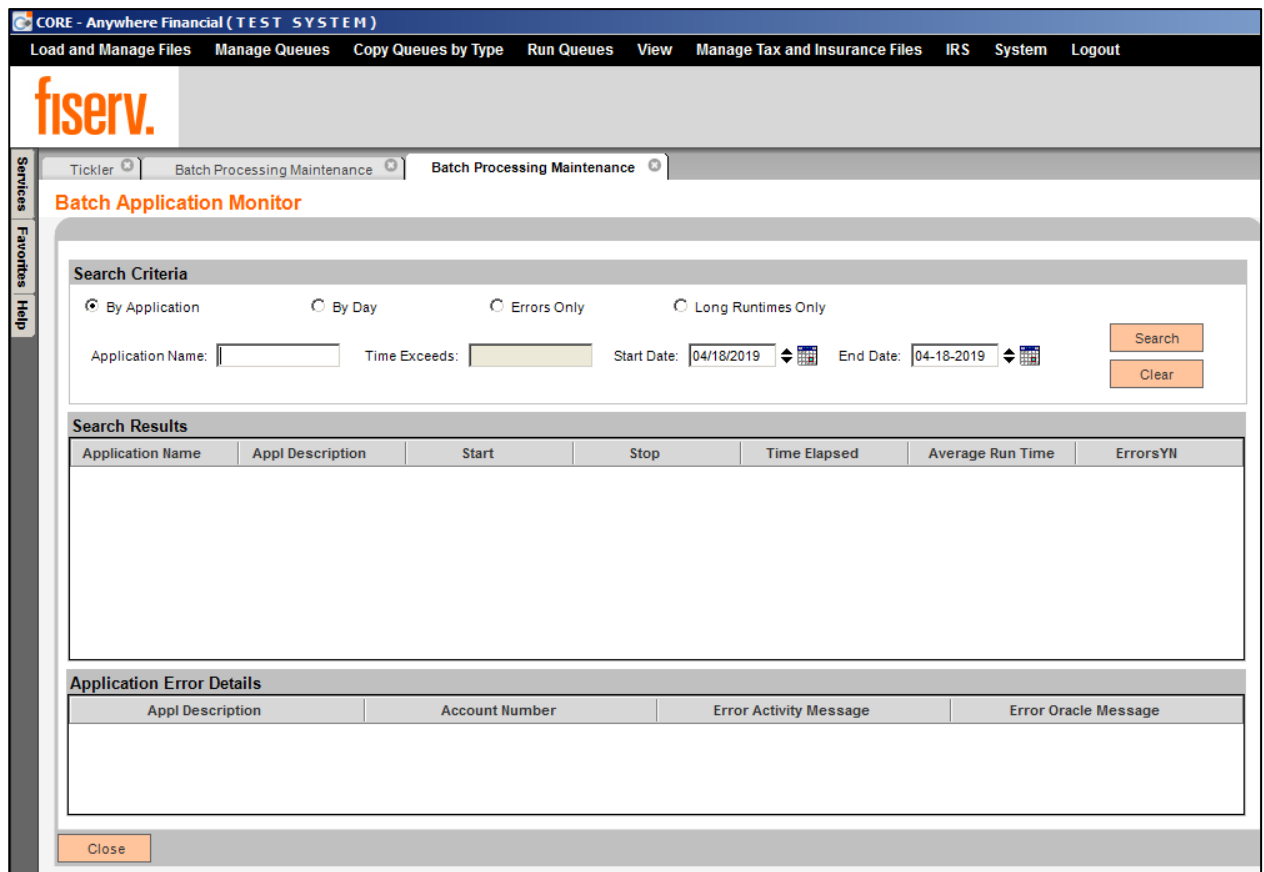
There are two new calculation variables:

- *Batch Average RunTime Days*. This variable value controls the calculation for the Average Run Time that displays in the Search Results grid. This value is the number of previous runs for that application that will be used to calculate the Average Run Time. For example, if the value was 30, the previous 30 instances of that run would be considered in the calculation to come up with an Average Run Time.

- *Batch Date Period Limit.* This variable value controls the acceptable date range in which a User may query for the batch application run times, and controls the initial dates presented in the Search Criteria section. It is recommended to keep this value to a smaller number (e.g. 90) as longer date periods will result in longer query times for the User.

Once these calculation variable values are defined, the User will proceed to use the application:

Navigation: Services>> Batch >>View>>Batch Application Monitor



Upon accessing the application, the User will have the ability to select from four options, as shown below. In all scenarios, the Application Name field references the actual Application Name (not description) of the DNA batch application. For example, the Checking Trial would be CK\_TRIAL.

The Application Name is not case sensitive and accepts special search characters (%), although it is not necessary.

The four search options are:

1. By Application. This option allows the User to search for a selected batch application by name. The Start and End Dates create a date range that the Effective Date field of the DNA Que table must fall between.
2. By Day. This option allows a User to search for batch applications for a given day.
3. Errors Only. This option allows the User to search for batch applications that had errors. The Start and End Dates create a date range that the Effective Date field of the DNA Que table must fall between. Only runs with existing rows in QueApplError will be returned.
4. Long Runtimes Only. This option allows the User to search for batch applications that ran longer than the selected time value. The Start and End Dates create a date range that the Effective Date field of the DNA Que table must fall between. Only runs where the time elapsed (difference between the StartDateTime and StopDateTime in the DNA QueApplHist table) is greater than the Time Exceeds field will be returned.

*Note: the Search Options utilize effective dates from when batch application queues were run, not the system date. On test systems it is often common for the system date to be ahead of the database effective date; for example, a test system may have an effective date of 03-31-2018 and a system date of 04-15-2018 on the actual "live" date of 04-15-2018.*

*In this example, if the User has run batch application queues on the actual system date of 04-15-2018 with the effective date of 03-31-2018, grid results would display batch application queue results from 04-15-2018. This will occur when dates are not "bumped" on the test system regularly.*

In the example below, the User has chosen to search by selecting the *By Application* option, querying for the LN\_TRIAL application in a selected date range.

The screenshot shows the 'Batch Application Monitor' window. The 'Search Criteria' section has 'By Application' selected. The 'Application Name' field contains 'LN\_TRIAL'. The 'Start Date' is '01-18-2019' and the 'End Date' is '04-18-2019'. The 'Search Results' table is as follows:

Application Name	Appl Description	Start	Stop	Time Elapsed	Average Run Time	ErrorsYN
LN_TRIAL	Loan Trial	04-18-2019 03:04:26	04-18-2019 03:04:12	4.77	4.77	N

The 'Application Error Details' table is empty.

In the example below, the User has chosen to search by selecting the *Errors Only* option, and also using a date range. This will display records for batch application queues that had errors:

The screenshot shows the 'Batch Application Monitor' window with 'Errors Only' selected in the 'Search Criteria' section. The 'Search Results' table is as follows:

Application Name	Appl Description	Start	Stop	Time Elapsed	Average Run Time	ErrorsYN
TD_REINT	TD Renewal Notices	04-18-2019 03:04:56	04-18-2019 03:04:56	0	0.01	Y
TD_NOTE	Time Deposit Renewal ...	04-18-2019 03:04:51	04-18-2019 03:04:51	0	0.00	Y
LN_CONFM	Loan confirmation letters	04-18-2019 03:04:51	04-18-2019 03:04:02	0.18	0.18	Y
LN_BILLS	Loan Billing	04-18-2019 03:04:46	04-18-2019 03:04:46	0	0.00	Y
SDB_LATENT	Safe Deposit Late and ...	04-18-2019 03:04:41	04-18-2019 03:04:41	0	0.00	Y
LN_YDTL	Loan YTD Detail Statem...	04-18-2019 03:04:41	04-18-2019 03:04:00	0.32	0.32	Y
LN_YDCL	Loan YTD Statements (...)	04-18-2019 03:04:36	04-18-2019 03:04:09	0.55	0.55	Y

The 'Application Error Details' table shows one error:

Appl Description	Account Number	Error Activity Message	Error Oracle Message
Loan YTD Detail Statements	671026905	No Recipient available for notice printing due...	

The User may further find information about a record in the Search Results grid if it had an error (highlighted in RED) and this information will display in the Application Error Details when the record in the grid is selected.

In the example below, the User has selected the *Long Runtimes Only* option for a range of dates, which will select all batch applications that were run within the selected date range and had a run time greater than 2:

The screenshot shows the 'Batch Application Monitor' interface. At the top, there is a navigation bar with 'Institution', 'Business Tables', 'System Tables', 'GL', 'Printing Operations', 'Product and Pricing', 'Manage', 'My Forms', 'System', and 'Logout'. Below this is the 'fiserv.' logo. The main content area is titled 'Batch Application Monitor' and contains a 'Search Criteria' section with radio buttons for 'By Application', 'By Day', 'Errors Only', and 'Long Runtimes Only' (which is selected). There are input fields for 'Application Name', 'Time Exceeds' (set to 2), 'Start Date' (01-18-2019), and 'End Date' (04-18-2019). Below the search criteria is a 'Search Results' table with the following data:

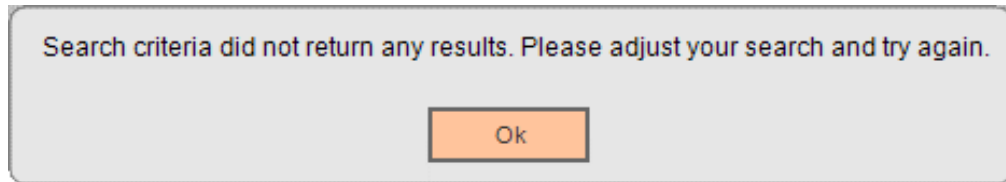
Application Name	Appl Description	Start	Stop	Time Elapsed	Average Run Time	ErrorsYN
MQ_TRIAL	Mortgage Trial	04-18-2019 03:04:41	04-18-2019 03:04:32	3.85	3.85	N
LN_TRIAL	Loan Trial	04-18-2019 03:04:26	04-18-2019 03:04:12	4.77	4.77	N
LN_DELQ	Delinquent Loans	04-18-2019 02:04:01	04-18-2019 03:04:36	2.58	0.87	N
CK_TRIAL	Checking Trial	02-28-2019 12:02:51		70037.20	21.70	Y
CK_TRIAL	Checking Trial	02-28-2019 12:02:28	02-28-2019 12:02:10	21.70	21.70	Y

Below the search results is an 'Application Error Details' section with columns for 'Appl Description', 'Account Number', 'Error Activity Message', and 'Error Oracle Message'. A 'Close' button is located at the bottom of the interface.

Additionally, in all cases, the row results will display in italics when the Time Elapsed value for that row's batch application results is greater than the Average Run Time for that batch application. This is designed so the User may easily determine if the batch application being reviewed is running longer than previous run trends.

**Application Messages:**

When no data is found, the following message will be displayed:



Additional application messages include:

If the User enters an End Date value that is less than the Start Date value, the application message “*Start Date cannot Exceed End Date, please correct and continue with your search*” will display.

If the User enters a value in the Start Date or End Date fields that is less than the minimum allowed date (as defined by the *Batch Date Period Limit* calculation variable value), the application message “*The value entered must be between MM-DD-YYYY and MM-DD-YYYY*” is displayed, where the date values in the application message are defined by the current date minus the value of the calculation variable.

**Parameters:**

N/A

**Variables:**

The Batch Application Monitor DNAapp utilizes new Calculation Variables that the Financial Institution may assign desired values to according to their system settings.

Calculation Categories:

A calculation category is required to associate the variables to the application. The following calculation category is used for that purpose.

Calculation Category Code	Description
BTMN	Batch Application Monitor



Calculation Types:

A calculation type is required to associate the variables to the application. The following calculation type is used for that purpose.

Calculation Category Code	Calculation Type Code	Description (how used)	MjMiYN
BTMN	BTMN	Batch Application Monitor	N

Calculation Variables:

The following calculation variables are required for the application. They are populated with the 'BTMN' calculation type.

Variable	Code	Description (how used)	Data Type	Default
Batch Average RunTime Days	BARD	This value will be used to calculate the runtime average for a specific batch application. The reference exists in the function OSIEXTN. FUNC_AVGBATCHRUNTIME.  The value will be subtracted from the input Start Date parameter. The average will then be calculated based on the runs between the Start Date parameter minus the calculation variable value and the End Date parameter.	NUM	30
Batch Date Period Limit	BDPL	This value is used to limit the calendar start and end date search fields to the current date minus the calculation variable value. This would limit a date block within this restriction.	NUM	90

**Tables:**

N/A

**Scheduling and re-run information (for batch applications):**

N/A

**Reports:**

N/A

**Screens:**

**Navigation:**

Navigation: Services >> Batch >> View >> Batch Application Monitor

**Screen Appearance (Batch Application Monitor):**

The screenshot displays the 'Batch Application Monitor' screen within the 'CORE - Anywhere Financial (TEST SYSTEM)' application. The top navigation bar includes 'Institution', 'Business Tables', 'System Tables', 'GL', 'Printing Operations', 'Product and Pricing', 'Manage', 'My Forms', 'System', and 'Logout'. The 'fiserv.' logo is prominently displayed on the left. Below the logo, there are tabs for 'Tickler', 'Batch Processing Maintenance', and 'Batch Processing Maintenance'. The main content area is titled 'Batch Application Monitor' and contains a 'Search Criteria' section with radio buttons for 'By Application', 'By Day', 'Errors Only' (selected), and 'Long Runtimes Only'. Search fields include 'Application Name', 'Time Exceeds', 'Start Date' (01-18-2019), and 'End Date' (04-18-2019). Below the search criteria is a 'Search Results' table with columns for Application Name, Appl Description, Start, Stop, Time Elapsed, Average Run Time, and ErrorsYN. The results table shows several entries, with 'LN\_YTDTL' and 'LN\_YTDCL' highlighted in orange. Below the search results is an 'Application Error Details' section with a table showing an error for 'Loan YTD Detail Statements' with account number 671026905 and the message 'No Recipient available for notice printing due...'. A 'Close' button is located at the bottom left of the screen.

Application Name	Appl Description	Start	Stop	Time Elapsed	Average Run Time	ErrorsYN
TD_RENNT	TD Renewal Notices	04-18-2019 03:04:56	04-18-2019 03:04:56	0	0.01	Y
TD_NOTE	Time Deposit Renewal ...	04-18-2019 03:04:51	04-18-2019 03:04:51	0	0.00	Y
LN_CONFM	Loan confirmation letters	04-18-2019 03:04:51	04-18-2019 03:04:02	0.18	0.18	Y
LN_BILLS	Loan Billing	04-18-2019 03:04:46	04-18-2019 03:04:46	0	0.00	Y
SDB_LATENT	Safe Deposit Late and ...	04-18-2019 03:04:41	04-18-2019 03:04:41	0	0.00	Y
LN_YTDTL	Loan YTD Detail Statem...	04-18-2019 03:04:41	04-18-2019 03:04:00	0.32	0.32	Y
LN_YTDCL	Loan YTD Statements (...)	04-18-2019 03:04:36	04-18-2019 03:04:09	0.55	0.55	Y

Appl Description	Account Number	Error Activity Message	Error Oracle Message
Loan YTD Detail Statements	671026905	No Recipient available for notice printing due...	

**Field Listing:**

Field	Description
<b>Search Criteria</b>	
By Application <radio button>	The By Application option will be the default search selected. When selected, the fields Application Name, Start Date and End Date will be enabled. The field Time Exceeds will be disabled. This option will return runs for the application within the date range specified with the Start Date and End Date. If a value is entered in the Application field, then only runs for that specific application within the date range specified will be returned. If the Application field is blank, then any application can be returned as long as the other criteria are met.
By Day <radio button>	When selected, the fields Application Name, End Date, and Time Exceeds will be disabled. The Start Date field is re-labeled to Select Day and is enabled for the user to enter the date they want to review. This option will return runs for that specific day based on the value of the Specific Day field.
Errors Only <radio button>	The Errors Only option will only return runs that have errors. When selected, the Time Exceeds field will be disabled. The Application Name, Start Date and End Date fields are enabled. If a value is entered in the Application field, then only runs for that specific application within the date range specified will be returned. If the Application field is blank, then any application can be returned as long as the other criteria are met.
Long Runtimes Only <radio button>	The Long Runtimes Only option only runs where the time elapsed (difference between the StartDateTime and StopDateTime in the DNA QueApplHist table) is greater than the Time Exceeds field will be returned. When selected, all fields will be enabled.
Application Name <text box>	This is the application name. It is not case sensitive and accepts search characters (%).  An example of the Application name would be CK_Trial for the Checking Trial batch application.
Time Exceeds <text box>	This is the length of time (in minutes) that a batch application has exceeded running.  <i>Note: This field only accepts integers for data input.</i>
Start Date <calendar>	Defaults to system date. This is the start date of the date period range which the value of the Effective Date field for the Que for the batch application(s) must fall between. The value for the calculation variable Batch Date Period Limit (BDPL) will limit the number of days back in time the User can select.
End Date <calendar>	Defaults to system date. This is the end date of the date period range which the value of the Effective Date field for the Que for the batch application(s) must fall between. The value for the calculation variable Batch Date Period Limit (BDPL) will limit the number of days back in time the User can select.
Search <button>	Clicking the search button runs the query associated with the active radio button and search variables.
Clear <button>	Clicking the clear button resets the page to the initial settings.
<b>Search Results (Panel)</b>	

Application Name <gridview row>	Batch Application Name  Example: CK_TRIAL
Application Description <gridview row>	Batch Application Description  Example: Checking Trial
Start <gridview row>	The timestamp when the batch application started.  <i>Note: this is the actual system date when the application started, not the effective date. On test systems it is often common for the system date to be ahead of the database effective date; for example, a test system may have an effective date of 03-31-2018 and a system date of 04-15-2018. In this case, if the User has run batch application queues on the actual system date of 04-15-2018 with the effective date of 03-31-2018, this row would display values from 04-15-2018. This will occur when dates are not "bumped" on the test system regularly.</i>
Stop <gridview row>	The timestamp when the batch application stopped.  <i>Note: this is the actual system date when the application stopped, not the effective date. On test systems it is often common for the system date to be ahead of the database effective date; for example, a test system may have an effective date of 03-31-2018 and a system date of 04-15-2018. In this case, if the User has run batch application queues on the actual system date of 04-15-2018 with the effective date of 03-31-2018, this row would display values from 04-15-2018. This will occur when dates are not "bumped" on the test system regularly.</i>
Time Elapsed <gridview row>	This is a calculated field that displays how long the batch application ran.
Average Run Time <gridview row>	This is a calculated field that looks at the last n times the batch application was run (n is defined by how many times the batch application was run between the Start Date value minus the value of the Batch Average RunTime Days calculation variable), as long as that calculation variable value does not fall outside of the Batch Date Period Limit date.  Example: if the Start Date is 03-18-2018 and the Batch Average RunTime Days value is 30, the program will look at the last 30 times the selected batch application was run to calculate the Average Run Time <u>provided</u> the last 30 times took place within the Batch Date Period Limit value. If that value was 90 (so 90 days back from 03-18-2018), the program will look at the most recent 30 (counting back from 03-18-2018) to arrive at the calculated Average Run Time.
ErrorsYN <gridview row>	Indicates if any errors exist.  Y – Errors exist. N – No Errors exist.
<b>Application Error Details</b>	

Appl Description <gridview row>	The Batch Application Description
Account Number <gridview row>	Account Number (if applicable)
Error Activity Message <gridview row>	The Activity Error Message
Error Oracle Message <gridview row>	The Oracle Error Message
<b>Common Screen Area</b>	
Close <button>	When selected, the screen is closed.

**Additional Requirements:**

- DNA 4.2.3 or higher.

**Configuration Checklist:**

Item	Test Environment	Production Environment
Ensure the User has been granted the 'BATI -- Batch Inquiry' Authorization Item to access the new Batch Application Monitor application.		
Ensure the Batch Application Monitor calculation variables values are defined.		

**Revisions:**

Date	App Version #	Change
05/2019	1.0.0.1	Application updated with change so that batch applications that have been stopped by the User and thus have no Stop Time value do not raise an unhandled exception when querying the data.
04/2018	1.0.0.0	Application Created