

Eccox Application Environment Management for Parallel Testing (Eccox APT) Features

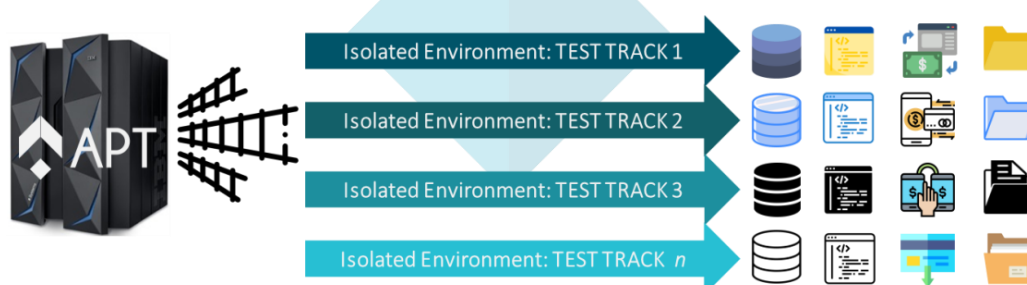
Datasheet

To minimize problems arising from conflicts of access to the database, companies call for testing serialization due to the lack of technology in managing the test environment, impacting the project's delivery speed and generating backlogs and a lot of stand by among the teams involved until it reaches the test, costing time and money, not to mention the speed to get a product launched to the market.

TESTS ARE DIRECTLY LINKED TO THE QUALITY, RELIABILITY AND SECURITY OF SYSTEMS

Eccox Application Environment Management for Parallel Testing (Eccox APT) automates infrastructure preparation processes for testing, enables the reprocessing of a given test and also enables the creation and execution of isolated scenarios through containerization of applications for testing by managing Containers (Test Tracks) using DB2®, VSAM, and Sequential bases both in Batch and Online (CICS® or IMS/DC®), and MQ® Queues on the IBM Mainframe Platform. The choice of the system components to be isolated allows the user to obtain his exclusive Test Track with cloned components and masses of tests that meet his specific needs, documented and transforming the tests into equity, and can be re-executed at any time, with reduced cost. In this way, all plans and test cases are stored in the repository and available for audits and consultations or even serving as a living model for testing new systems or programs.

PARALLEL TEST WITHOUT CONFLICTS OF DATABASE AND APPLICATION VERSIONS



Agile software deliveries at the speed of business like never before, achieve Digital Transformation on Mainframe with Eccox APT - Developed to give maximum scalability and productivity in Mainframe software development, reduce 50% of the total testing time on the platform with the

operation of Containers (Test Track) of Eccox APT for z DevOps with automation of environments and parallel and continuous test cycles.

CONTINUOUS TESTING & CONTINUOUS DELIVERY



Enhanced efficiency of functional testing automation, integration testing, and user interface testing.



Independence of the back-office user to quickly create their own test data in isolated databases.



Reduced cost to automate tests to Create, Run, Update, and Reuse in the UAT (User Acceptance Test) for continuous delivery purposes.



Freedom for unlimited test cycles for integrating apps in a single, isolated environment with integrity for higher QA (Quality Assurance).



No conflicts for simultaneous continuous tests - activated by APT tracks running in the same LPAR, CICS or IMS region.

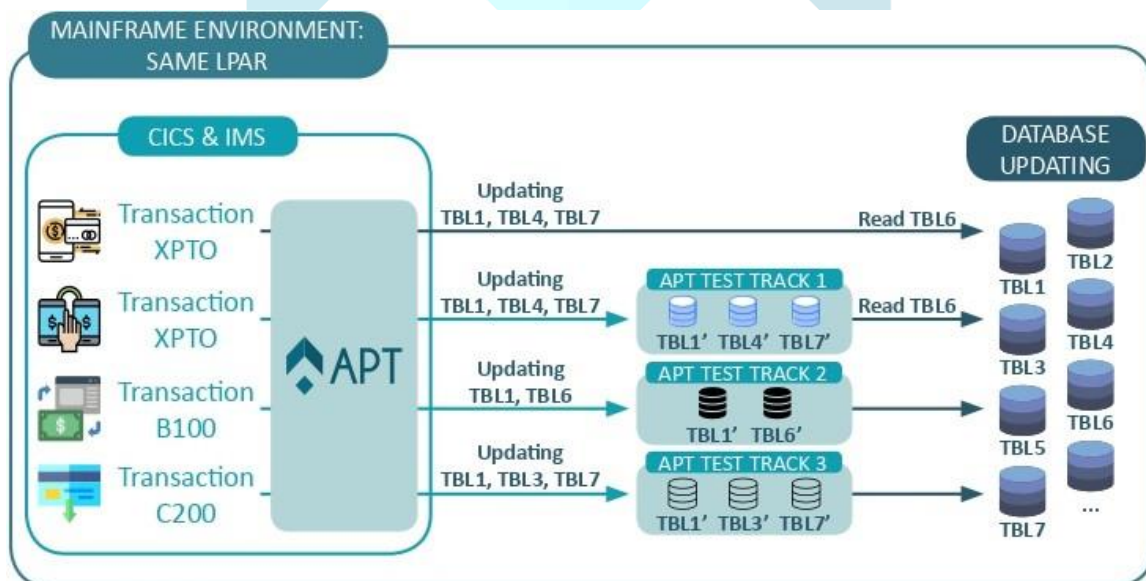


Store test case conditions, data, and system settings to turn test cycles into assets. Reusable tests with integrity.

ENABLING DEVOPS THROUGH CONTINUOUS TESTING ON THE MAINFRAME:

Continuous testing is a principle of software testing, in which all tests are performed at all times, providing continuous feedback on the quality and integrity of applications. But to obtain continuous testing, organizations must first adopt test automation.

Eccox APT boosts test case creation and execution cycles for maximum productivity in unit testing, integrated testing, UAT, and Production environment.



*TBL - Abbreviation for Table

MAIN FEATURES:

ECCOX APT CONTAINERIZATION for CICS®

It allows users to isolate the executions of their transactions, program versions, DB2 tables, and VSAM files, eliminating conflicts with tests of the same components among other projects or users, eliminating the rework generated by the conflicts. During the process of creating a Test Track, the user informs which components he intends to isolate for his Test and, through an established convention - which can be the user's code, an extract of the input that the transaction will receive for its execution or other crucial information - your test runs without conflicts with the other components in common. After the end of the tests, the user, with a simple touch, destroys the created track, eliminating the environment's cloned components. If there is a need to perform new tests on this track, the user does not need to register the components again, as every track created becomes an asset and serves as a knowledge base for as many new tests as needed.

ECCOX APT CONTAINERIZATION for IMS®

It allows users to isolate DB2® transactions, program versions, and tables, eliminating conflicts with testing the same components among other projects or users, eliminating the rework generated by conflicts. During the process of creating a Test Track, the user informs which components he intends to isolate for his Test and, through an established convention - which can be the user's code, an extract of the input that the transaction will receive for its execution or other crucial information - your test runs without conflicts with the other components in common. After the end of the tests, the user, with a simple touch, destroys the created track, eliminating the environment's cloned components. If there is a need to perform new tests on this track, the user does not need to register the components again, as every track created becomes an asset and serves as a knowledge base for as many new tests as needed.

ECCOX APT CONTAINERIZATION for JOBS

It allows users to isolate executions of their jobs, program versions, DB2 tables, and VSAM or sequential files, ending conflicts with tests of the same components among other projects or users, eliminating the rework generated by the conflicts. While creating a Test Track, the user informs which components he intends to isolate for his Test (including the JCL for execution). These components are cloned, and his Test will be executed without conflicts with the other components in common. After the end of the tests, the user, with a simple touch, destroys the created track, eliminating the environment's cloned components. If there is a need to perform new tests on this track, the user does not need to register the components again, as every track created becomes an asset and serves as a knowledge base for as many new tests as needed.

ECCOX APT CONTAINERIZATION FOR MQ®

Enables users of the Eccox APT solution to use MQ queues and messages, contemplating the scenarios:

1. Cloning all messages from a given MQ queue in the Mainframe Environment, under CICS and IMS: the queue name would be used as the Unique Identifier. All messages in that queue would be redirected to a cloned transaction.
2. Cloning separately from messages in a queue. This process will be implemented through the following procedures:
 - Cloning an MQ queue: Definition of an MQ queue similar to the original, directed to a clone transaction;
 - Use of MQ EXITs to intervene in MQPUT to direct certain messages, according to their content, to the cloned queue on the Mainframe Platform.

ECCOX APT DB2 LAYOUT MODIFIER FRAMEWORK

It allows you to clone a table, change its layout by means of, for example, SQL ALTER TABLE commands, and use this modified version in programs that use that table and are in the same change package (of your preferred Version Control Tool), allowing you to generate clones that, in addition to having changes in your code concerning the Production version, also use a DB2 table with a different layout than the existing one in the environment, without any interference in the other modules that use the same DB2 table.

ECCOX APT DISCOVERY FOR DATA MANAGEMENT (*DB2 for z/OS v11 and v12 Support)

It allows the user to perform a search through one or several DB2 tables, being returned the list of all the programs that access, allowing the user to create the Test Track from these components.

ECCOX APT DISCOVERY FOR JCL (Batch Impact Analysis of JOB, PROCEDURES, and INCLUDES)

It allows the user to perform automatic traceability (Automatic Cross Reference) of all components used in the JCL from a JCL, being returned the list of all Programs, Procs, Includes, and Files used. From this search, all components (Programs, DB2 Bases, VSAM, and Sequential Files) that are accessed are also returned, allowing the user to create the Batch Test Track from these components.

ECCOX APT DISCOVERY FOR LIBRARIES (*PDS and PDSE supported)

It is a functionality that allows the traceability (Automatic Cross Reference) of all components from a PDS/PDSE file defined as repositories of source programs in the Cobol language. When this function is executed, the user is returned to the list of all accessed programs, VSAM files, sequential files, and DB2 tables. In addition, all accesses (CRUD matrix) that the programs do in the bases are returned to the user to subsidize the automatic process of creating a track. It is a simple and automatic impact analysis oriented to the test case informed by the user.

ECCOX APT DISCOVERY FOR ONLINE SERVICES (* CICS and IMS support)

It allows users to perform an automatic search of the Test's transaction object to be performed, being returned to the corresponding head program registered in IMS® and/or CICS®.

ECCOX APT DISCOVERY FOR PROGRAM ANALYSIS (*Cobol all Versions support)

It is a functionality that allows the user to inform the DB2 programs that would like to be cloned in the Test Track, and all components are automatically listed (Programs, DB2 Bases, VSAM, and Sequential Files). With a simple click, the user selects which components are eligible for your Test Track.

ECCOX APT DISCOVERY FOR SCLM

From a Change Package, which is defined in the ChangeMan ZMF® and/or CA Endeavor® tools, traceability of all contained components is carried out. They are automatically returned to the Test Track that the user wishes to carry out the creation. In addition, all components (Programs, DB2 Bases, VSAM, and Sequential Files) that are accessed and that are not part of the Change Package are also returned to the user, along with the CRUD matrix that the programs make based on form to subsidize the automatic process of creating a track. With a simple click, the user selects which components are eligible for his Test Track. It is a simple and automated impact analysis oriented to the test case informed by the user.

ECCOX APT FEATURE FOR IBM DEBUG TOOLS FOR ZOS

It enables the simultaneous use of Eccox APT and IBM® Debug Tool for z/OS® solutions, allowing you to debug a program's clone as if it were the original program.

ECCOX APT FOR zDEVOPS

It allows transforming the test plans and their cost materializations to equity, documenting, and saving everything necessary to implement the infrastructure to execute the test cases. This saves a lot of time to redo a test passed for maintenance, correction, or evolution, allowing test conditions that have been increased over time, preventing, for example, old errors from returning due to some problem in changing the code. The plans and test cases will then have a treatment similar to that dispensed with the programs: they will be stored, reviewed, evolved, and reused.

The WEB interface brings Exclusive features that make the solution unique on the market.

- Creation of clones of real elements identical to the original as DB2®, VSAM and Sequential bases, both Batch and Online (CICS® and IMS/DC®) in Mainframe environment for the generation of microenvironments;
- Creation of elements such as DB2®, VSAM, and Sequential bases, both Batch and Online (CICS® and IMS/DC®) in Mainframe environment in a fully automatic way without the need for the support and support teams;
- Clustering of components in a test plan, creating a unique environment for each test condition on the Mainframe allowing the inclusion of the same element as DB2®, VSAM and Sequential bases, both Batch and Online (CICS® and IMS/DC®) in different test plans;
- Registration and cloning of elements such as DB2®, VSAM, and Sequential bases, both Batch and Online (CICS® and IMS/DC®) modified and/or requiring isolation to meet the test condition; all other components will be used directly from the environment Mainframe;

- Artificial Intelligence for decision making in each Mainframe execution, allowing the targeting to the cluster of isolated elements;
- Storage of the test plan for reuse in the PDCA1 concept: Create-Destroy-Update-Reuse through WEB interface with just one click;
- To use the product and the created environments, no program or source code changes are necessary;
- When creating the test plan, the targeting occurs automatically without any change in the environment.

Main Benefits:

- Real Test in segregated Mainframe environment with pioneering containerization technology on z/OS, without emulation or virtualization;
- Isolated real components allowing Debug and database changes;
- Healthy original environment eliminating incidents due to changes or conflict of simultaneous executions in the shared environment;
- It does not require any infrastructure changes or the acquisition of new licenses for basic software;
- Complete automation of the setup process of environments and simplified test cases for continuous integration and functional tests, agile and reusable execution;
- Intelligent impact analysis (APT DISCOVERY) of all application/services/API components for containerization and 100% automated test case execution;
- Automated processes for managing test environments (application and data) without the need for Support from support teams or specialized Support;
- Focus on test processing with full interoperability for end-to-end executions;
- Knowledge storage of the criteria for creating environments and criteria for carrying out tests for reuse and updating the components of future test cases;
- Isolation of test environments with DB2®, VSAM and Sequential bases, both Batch and Online (CICS® and IMS/DC®), allowing competition between developers without interference in common files, databases or programs;
- Possibility to perform regression tests with reduced cost and maximum agility and scalability;
- Higher quality of tests and, consequently, of application systems in general;
- Reduction of developers' time with rework for inefficient tests (Shift-Left);
- Optimization of developers' working time by preparing and validating the execution of their tests;
- Reuse of the investments already made in the construction of tests.

ABOUT ECCOX

Eccox provides impactful results for continuous process improvement goals for software engineering, application quality assurance, automated software development testing and optimization of computing resources to achieve optimal Mainframe efficiency. We offer a unique technology toolkit for the actual activation of the DevOps methodology. Innovations for faster time to market with better software quality and dramatically reduce of the test cycle wait time.