KeneteK Inc.

How KeneteK helped its customer in implementing the tokenization of DB2 Tables

About the customer

The customer that requested the support service for the PCI-DSS Scope Definition:

- Is one of the main financial groups in Europe. With a network spanning over 50 markets in 17 countries, with over 8,500 branches and over 140,000 employees.
- Processes card payment data as Financial Institution, Acquirer, Issuer, Service provider and Merchant.
- Is a service provider and his technology ecosystem is adopted by over 32 companies.
- Has over 250 employees that are entrusted to manage the payment card applications.
- Has an IT architecture that spreads from the Mainframe to the distributed environment.

About KeneteK

KeneteK is a global company with a highly qualified staff whose mission is to support you to manage your Application in a changing environment and put your BUSINESS in a better position to predict and control the future.
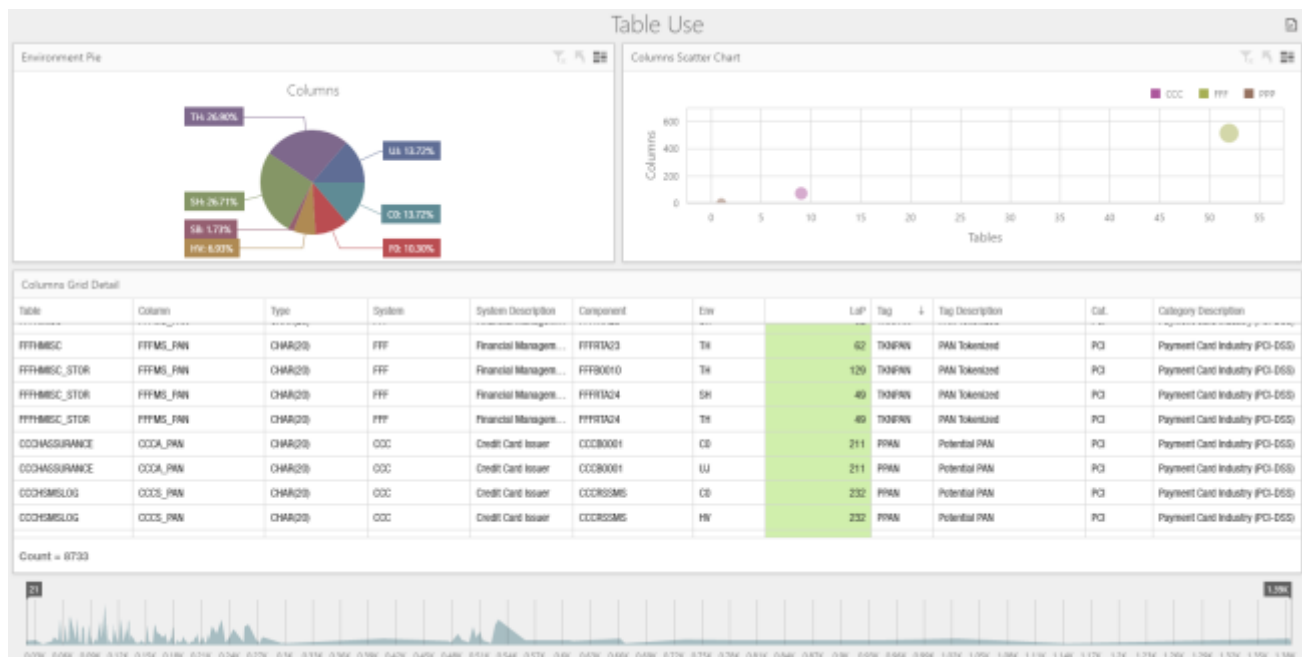
In over twenty years KeneteK has developed its skills and expertise. Founded in 2011 KeneteK has begun giving its customers an exhaustive answer in the field of application and data analysis.

Since 2012 KeneteK has been PCI Participating Organization and showcases its products and services at the PCI Community Meetings all over the world since 2013.

The customer's problem

> *Payment card processing is **critical** for our **business** and we need to improve and maintain its security in a continuing basis.*

"We needed a solution that could help us identify all the DB2 Tables that store PAN and all the process that manage the PAN to reduce the effort of implementing a tokenization solution in our applications."

Dashboard that displays the DB2 Table Columns and their categorization.

The dimensions of the problem

KeneteK, using its *tools*[1], discovered and scanned:

- Over 30 applications (with a total of over 70 million line of code).
- Over 8,000 DB2 tables and 108,007 columns.
- Over 115,000 sequential files that receive data from the DB2 table.
- On some tables the PAN was the primary key or an index column.

Possible solutions

With a *manual approach*[2] it is difficult to identify where PAN (Primary Account Number) is managed and stored. Maintaining a control over the tokenization deployment in such a complex environment is also extremely complex..
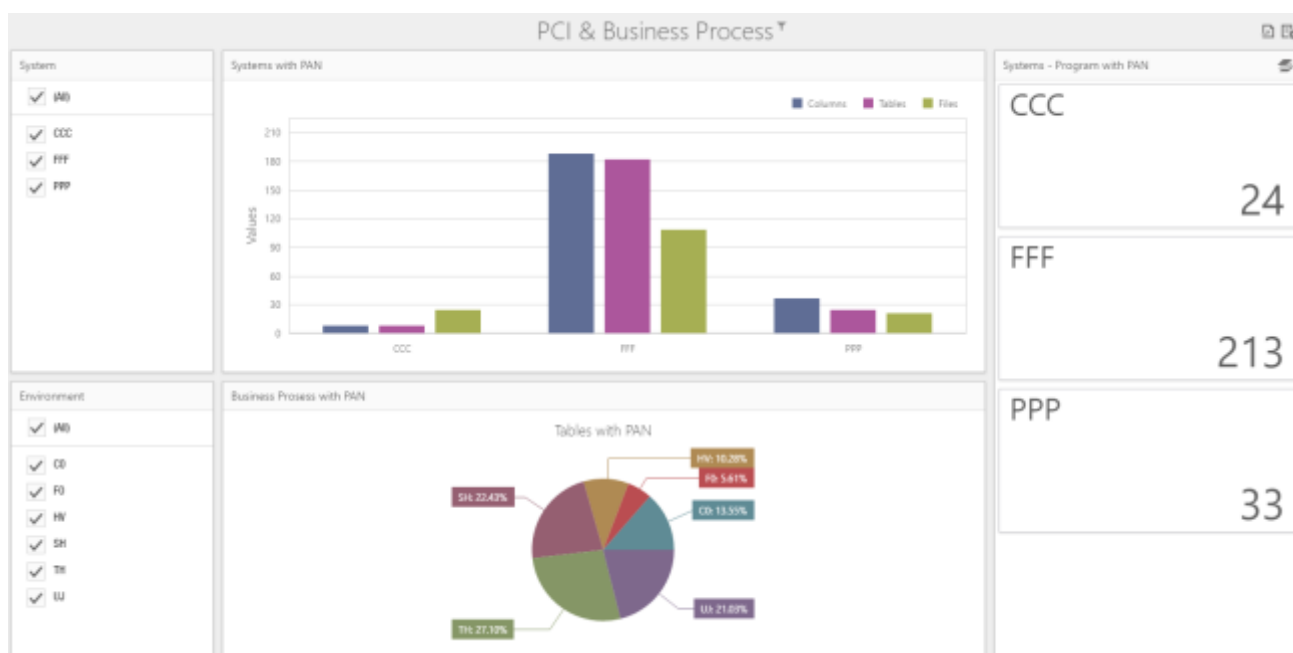
The usual approach, when talking about the mainframe environment (DB2) and the point 3 of the PCI-DSS, would be to use compensating controls instead of following the guidelines given by the council. This is because, more often than not, the complexity and risk involved in performing such tasks is too high and the market does not offer many tools to help the end user.

KeneteK's solution

KeneteK uses a holistic approach thanks to the tools that have been developed over the years. By performing a static analysis of the application source code and data the customer has the power to truly know what happens in their environment with the minimum effort on its side, the only phases where the customer's IT support is required are:

1. During the source code and data extraction.
2. During the architecture definition.
3. During the optional customization of the COBOL, JCL, CICS, IMS or SQL parsers to support special compiler customizations.

The produced data can be shared within the various actors involved in the tokenization process, both internal and external to the organization, using a *centralized platform*[3] where people from different backgrounds can navigate through dashboards, metrics and reports and get the information they need to achieve their goal in the most efficient way possible.

Dashboard that display where the columns and files with PAN

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1. The tools used by KeneteK are their proprietary KLR© and ASA© Pan Scout. See "About KLR© and ASA©" below for more information.
2. By manual approach we intend an approach where a team of highly qualified professionals interview application managers and manually go through the applications and business processes with them.
3. The centralized platform Is a win and/or web client (KLR.Net© and APS.Net©) provided by KeneteK where the customer can, once authenticated, access the information uncovered during the analysis process using dashboards, reports, etc. All the dashboards and reports can be customized to customer requires. All the information can be extracted (if authorized by a platform administrator) to standard formats (xls, pdf, etc.) to easily share using methods external to the platform itself.

About KLR© & ASA©

KLR© (Knowledge Language Recognition) is the answer in the field of application analysis. Proposed as a holistic engine it is used to analyze the evolution of a complex system and its parts, and the relationship between each other.

ASA (Alphanumeric String Analyzer) Pan Scout©. It is the answer in the field of data analysis, it can find the PAN in systems, and help identify unsecure data managed.

The Results

Using KeneteK's approach the customer was able to identify the best way to implement the tokenization in record time.

Of the 8 environments analyzed KeneteK's approach found the exact location of where the PAN was stored in tables, sequential files and used in systems, components, lines of code. What seemed to be a huge problem was reduced to an area of around 3% of the total data analyzed.

KeneteK also gave its customer a precise guideline to identify the possible tokenization algorithms, based on table structure and PAN use, and how to approach said task, based on process criticality.

This resulted (compared to the other approaches) in a drastic reduction of time and relative cost for the tokenization implementation, an identification and reduction of the risk and the peace of mind of the customer that now precisely knows where to aim at for securing its PAN.

Not less important was the massive reduction of economic and time impact for maintaining the PAN propagation under control thanks to the integration of KLR© and ASA© Pan Scout in the customer's processes.