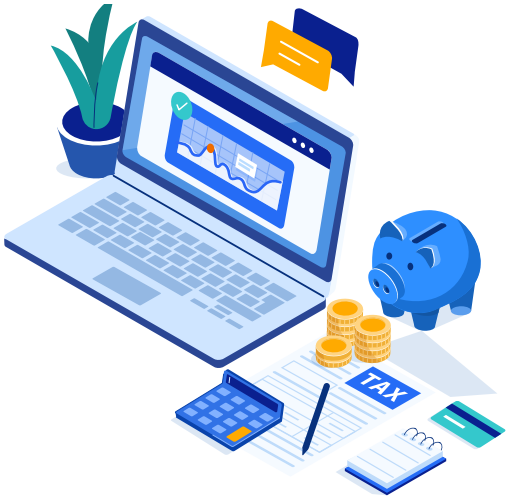
NRW Fiscal Authority

Change Auditing and Recovery for optimizing the use of Active Directory in the NRW Fiscal Authority



The North-Rhine Westphalian fiscal authority comprises the Finance Ministry of the State of North-Rhine Westphalia as the highest state institution along with various higher regional authorities and mid-level authorities such as the State Office of Salaries and Pensions, the State Finance Office, the Regional Finance Authority, as well as the individual tax offices including company audits and tax fraud investigations as lower-level state institutions. The fiscal authority also runs training institutions such as the University of Finance at Schloss Nordkirchen, the Regional School of Finance, and its academy of professional development. The fiscal authority's central data center also functions as top-level regional processing institution responsible for the operation of the entire IT infrastructure. This data center serves as the central service provider for approximately 140 locations with ca. 30,000 users across the state.

> *"Even after the start of productive operation, we have always had somebody with a great deal of expertise at our side. But operation is so problem-free that we only rarely have to draw on that resource."*
>
> Dietmar Rilk, Head of Windows Systems, NRW Fiscal Authority

Naturally, information technology is a sensitive subject for any fiscal authority, since it processes largely confidential and personal data. This makes it essential to set up and then implement highly detailed rules about which personnel members have access to which types of data and applications. The Fiscal Authority of the State of North-Rhine Westphalia uses Microsoft's Active Directory (AD) to securely manage its users and their access rights and permissions. AD serves as central directory, managing all IT objects such as users, groups, applications, and devices. It also allows administrators to centrally and efficiently control access to resources, consistently determining and reliably managing user permissions.

Active Directory as Critical Resource

As a central service, AD has a great deal of significance when it comes to the availability of data and applications across North-Rhine Westphalia's entire network of financial institutions. Failures, even partial ones, invariably lead to personnel being unable to complete their tasks, limiting the functionality of all departments across the board. Furthermore, AD offers no simple, in-application means of recovery, so that such problems can be solved only manually and with high personnel and man-hour costs.
In particular Ad's protocol functions are extremely limited, often making it impossible to track changes. At the same time, it is

usually those very changes that lead to errors and failures. Just such a partial failure of Active Directory was the Fiscal Authority's main reason to look for a solution that would enable efficient change management as well as comprehensive auditing. In addition, the solution had to offer a simple way to fully recover objects in AD after potential failures, and to roll back changes, ideally in increments. Auditing would also support revision-proof electronic filing, and would enhance security, since nowadays the early phase of most cyber-attacks focuses on changes to the Active Directory system in order to give attackers additional room for exploits using expanded access rights.

It was a recommendation that first attracted the attention of Dietmar Rilk, head of the Authority's Windows Systems division, and his team to Cygna Labs and its Cygna Auditor platform, distributed in Germany by N3K Network Systems, among others. The application's function module "Cygna Auditor for Active Directory" monitors all administrative activity within the critical directory service Active Directory in real time, thus giving administrators the ability to recognize all changes and, if desired, raise alarms on unauthorized changes in real time. Based on these audit data, any changes can be reversed if necessary—regardless of whether they were caused by faulty configuration or external attack. For this purpose, the Cygna Auditor platform and its "Cygna Recovery" function module offers an accurate rollback function based on the collected AD audit data with no back-up time point. This means that data can be restored for any desired point in time, with a high degree of granularity of all AD objects.

> *"Since roll-out in August of 2021, the Cygna Auditor platform and its function modules 'Cygna Auditor for AD' and 'Cygna Recovery for AD' have been in failure-free operation at the Fiscal Authority."*
>
> Dietmar Rilk, Head of Windows Systems, NRW Fiscal Authority

Centralized Event Monitoring and Evaluation

Since the previous partial failure had been classified as a serious security risk, the Fiscal Authority was able to implement the Cygna Auditor platform in August 2021 in full compliance with public procurement law. "What was particularly important to us was being able to centrally monitor and comprehensively evaluate events in AD," Dietmar Rilk explains. "That is the precondition for recognizing critical events and being able to offer a largely automated reaction to them rather than just spitting out alarms on the console." What is more, its seamless and comprehensive documentation of access and changes meant that the Cygna Auditor platform and its "Cygna Auditor for AD" significantly simplified the ongoing and strict compliance with the GDPR and all specifications of Germany's BSI (Bundesamt für Sicherheit in der Informationstechnik, Federal Office for Information Security).

Core services

- Cygna Auditor Platform
  Comprehensive, integrated auditing, alerting, and reporting platform.

About Cygna Labs

Cygna Labs is a software developer and one of the top three global DDI vendors. Many Fortune 100 customers rely on Cygna Labs' DDI products and services, in addition to its industry-leading security and compliance solutions to detect and proactively mitigate data security threats, affordably pass compliance audits, and increase the productivity of their IT departments.

Cygna Labs Corp

sales@cygnalabs.com
Toll Free: 844.442.9462
Intl: +1 (305) 501-2430
www.cygnalabs.com