CARO

# CARO-Suite

Access rights securely under control!

With the CARO-Suite at your side, you can close security gaps in your access rights and automatically protect your valuable data.

- ✓ Risk assessment by experts
- ✓ Customized dashboards
- ✓ Automated clean-up processes
- ✓ Live check of access rights
- ✓ Hybrid scenarios analyses
- ✓ Easy display of role permissions
- ✓ Simple to integrate and easy to use

### CARO-Risk Assess ©

**For your overview**

Overview through expert risk assessment and comprehensive access rights analyses.

### CARO-Automate ©

**For your relief**

Efficiency through detailed recommendations for action and automated cleaning.

### CARO-Secure ©

**For your control**

With compliance-conform reports and audit-proof logging.

### CARO-Live ©

**For real-time transparency**

No more waiting times. Real time instead of database

SECURITY MADE IN GERMANY

# CARO-Suite

## 4 modules for your IT security

With the CARO-Suite, you can analyse and automatically eliminate permission errors and access rights risks. Save time and money with clean access rights structures and optimised permissions.

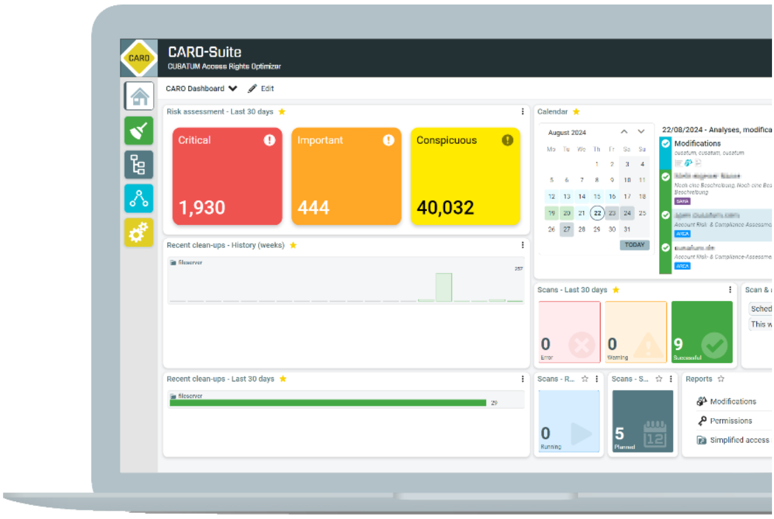
### The CARO-SUITE offers for your IT security:

### CARO – Risk Assess ©

- Risk assessment by experts
- Permission analyses
- Accounts and resources view

### CARO - Automate ©

- Automated clean-up
- Recommendations for actions
- Task scheduling faster



### CARO - Secure ©

- Audit-proof reports
- Simple reports for data owners
- Compliance-conform
- Configurable dashboards

### CARO - Live ©

- Check access rights live
- Recognise risks immediately
- No more waiting times
- Real time instead of database

# Risk assessment by experts

With the **risk dashboard**, you can see at a glance where your biggest risks are and how you can automatically rectify the problems with just a few clicks.

| Risk assessment | Clean-up modules | Explanation | Analyses |
|---|---|---|---|
| 🟥 Critical | VASS<br>ARCA<br>RAPA<br>DUKE<br>DARS<br>BAKS<br>SARA | These analyses find access rights errors that are classified as critical by our experts.<br>Critical errors are caused by unauthorised access rights and should be rectified as a matter of priority. | ✓ Permitted owner analysis<br>✓ Direct user permissions<br>✓ Redundant access rights<br>✓ Interrupted inheritance<br>✓ Inactive computers<br>✓ Password never expires<br>✓ Activated inheritance in shares<br>✓ Open shares<br>✓ Privileged roles<br>✓ Global administrator role<br>✓ Number of global admins<br>✓ Expiring client keys |
| 🟧 Important | HERITA<br>MARS<br>VASS<br>ARCA<br>LARS<br>SARA | These analyses find other problems in your system that are classified as important.<br>Such relevant problems should be rectified promptly. | ✓ Creator-owner<br>✓ Minimum access rights<br>✓ Moved directories<br>✓ Unwanted accounts<br>✓ Inactive users<br>✓ List group analysis<br>✓ Everyone full access permissions<br>✓ Group role assignments<br>✓ Cloud-native accounts role assignments<br>✓ Inactive guest users<br>✓ Inactive subscriptions |
| 🟨 Conspicuous | TEUS<br>ARCA<br>SARA | Security anomalies are found in the access rights.<br>In our experience, these anomalies should be checked by your administrators. | ✓ Unkown account references<br>✓ Outdated password<br>✓ Deactivated user<br>✓ User never logged in<br>✓ Empty groups<br>✓ Groups without description<br>✓ Non-administrative approvals<br>✓ Inactive cloud-native users<br>✓ Cloud-native users |

# CARO-Suite

## Analysis and clean-up modules

The CARO-Suite includes 13 clean-up and analysis modules as standard.

BAKS

### Owner analysis and correction software

- Ensures authorised owners so that administrative accounts retain their permissions, e.g. so that backup tools work
- Analyses security risks by removing unauthorised and uncontrollable access rights

**Correct owner**

LARS

### List groups Analysis and restructuring software

- Analysing permissions in folder hierarchies
- Manage list permissions in parent folders

**Errors in list groups Analyse**

TEUS

### Tool for removing unknown SIDs

- Removes dead SIDs and makes the documentation of your access rights easier to read and understand again
- Reduces the number of queries from your auditors and documents that you have full control
- Provides more security, as less attack surface for SID history injection

**Remove dead SIDs**

DARS

### Direct access to analysis and restructuring software

- Identifies direct permissions of users
- Corrects these entries efficiently

**Check direct permissions**

RAPA

### Redundant Account Permission Analysis

- Identifies redundant permissions
- Checking group memberships with simultaneous direct permissions

**Redundant permissions eliminate**

SARA

### Share Access Rights Analysis

- Analysis of share access rights
- Check for inherited NTFS access rights
- Searches for "open shares" for authenticated accounts
- Searching for any-full-access shares
- Check for the existence of non-administrative permissions

**Check share permissions**

# Analysis and clean-up modules

As standard, 13 clean-up and analysis modules are supplied with the CARO-Suite.

DUKE

**Remove direct access rights for unwanted accounts**

- Identifies all access rights of the configured unwanted accounts and removes them
- Reduces security risks by removing unknown and uncontrollable access rights

**Remove direct unwanted permisssions**

VASS

**Inheritance analysis and sanitisation software**

- Identifies changed permissions in folder hierarchies
- Alignment of permissions through inheritance or other system-specific tools

**Restore broken inheritances,**

**Find moved directories**

ARCA

**Account risk and compliance assessment**

- Analysed account-based on best practice criteria
- For Active Directory and Entra ID
- **AD**: Inactive user or computer accounts, deactivated user accounts, user never logged in, empty groups and groups without description, accounts with passwords that never expire
- **Entra ID**: Global administrators check for members and count, Privileged role assignments, Groups in role assignments, Use of cloud-native accounts, expiring client secrets, finding inactive guest users and inactive cloud-native users, Expiring subscriptions

**Risk and compliance dashboard for Active Directory and Entra ID**

HERI

**Remove creator owner on file system**

- Removes the creator owner and prevents the creation of new dead SIDs
- Allows a clean migration, e.g. to the cloud

**Remove creator-owner**

MARS

**Minimum permissions analysis and restructuring software**

- Checks all documents and folders for required access rights for accounts, considering both direct and indirect access rights
- Sets missing permissions

**Minimum permission check**

# Display and report permissions

With the EBIS module, CARO displays a global resource view with the *actual permission situation*. You can create permission and use case reports, easily adaptable to your corporate identity using Microsoft Word Office templates.

EBIS

### Recording the actual permission situation

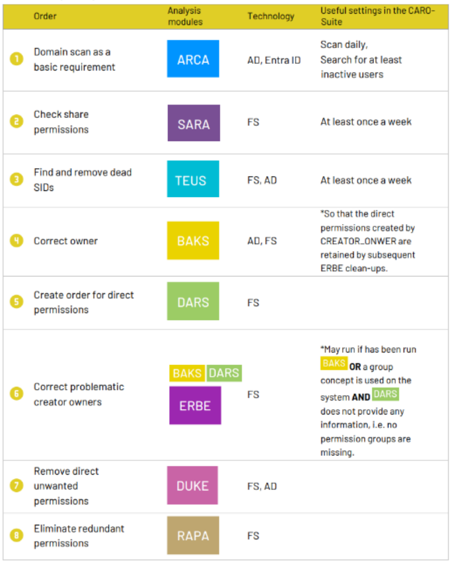
- Records the permission situation on file servers
- Analyses for interrupted inheritance hierarchies, shifted directories or null DACL in the ACEs, among other things
- Display of missing owner entries
- Shows changed permissions in detail below, such as added or removed access rights
- Shows group memberships with direct and indirect membership relationships
- Reports for the actual permission situation "Who has access where?"
- Reports on changed permissions below
- Difference reports for a directory structure
- Report "Where does a user have access?"

**Recording the actual situation and report permissions**

## Best Practices

It makes sense to use certain analyses together for cleaning. In our flyer *Best practices and use cases for cleansing*, you can find out more about a recommended sequence and sensible combinations of CARO analyses for efficient cleansing.

Use cases are also described for each clean-up module.



| | Order | Analysis modules | Technology | Useful settings in the CARO-Suite |
|---|---|---|---|---|
| 1 | Domain scan as a basic requirement | ARCA | AD, Entra ID | Scan daily,<br>Search for at least inactive users |
| 2 | Check share permissions | SARA | FS | At least once a week |
| 3 | Find and remove dead SIDs | TEUS | FS, AD | At least once a week |
| 4 | Correct owner | BAKS | AD, FS | *So that the direct permissions created by CREATOR_ONWER are retained by subsequent ERBE clean-ups. |
| 5 | Create order for direct permissions | DARS | FS | |
| 6 | Correct problematic creator owners | BAKS DARS<br>ERBE | FS | *May run if has been run BAKS **OR** a group concept is used on the system **AND** DARS does not provide any information, i.e. no permission groups are missing. |
| 7 | Remove direct unwanted permissions | DUKE | FS, AD | |
| 8 | Eliminate redundant permissions | RAPA | FS | |

**Mr. L., System Administrator***

"I don't want to be so euphoric that we have found so many errors. But now I am glad that the CARO-Suite cleaned up so quickly!

*Names and company information have been shortened for data protection reasons. We would be happy to provide you with these references in a personal meeting.

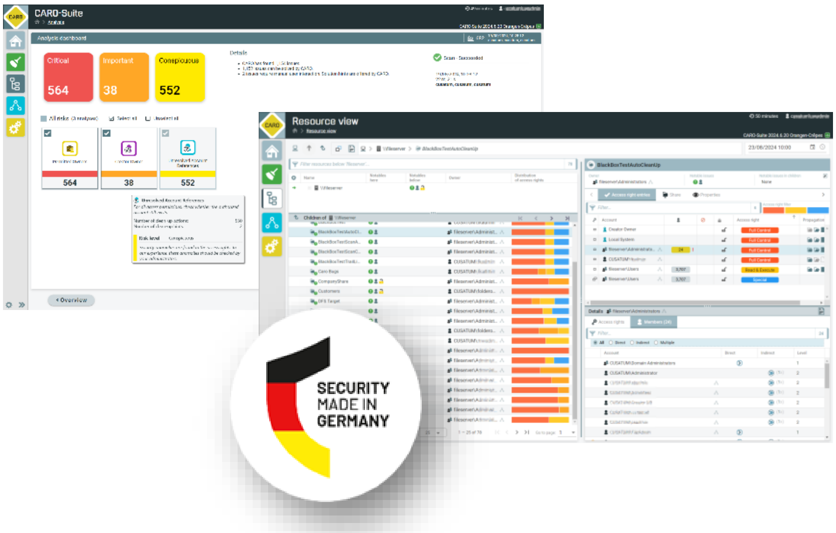
# CARO-Suite

## CARO-Suite - Access rights securely under control!

Historically grown permission structures are a thing of the past with CARO. Security gaps are eliminated and automatically reduced. CARO brings order to your IT structures!

### THE CARO-SUITE IN DETAIL

- ✓ Risk assessment with expert knowledge
- ✓ User-configurable dashboards for the clean-up progress
- ✓ Detailed analyses for access rights errors with recommendations
- ✓ Clear task scheduling with calendar view
- ✓ View and analyze access rights live in real time
- ✓ Global resources view of access rights with group memberships
- ✓ Accounts view with group overview, search and display of anomalies
- ✓ High-performance scans and comprehensive analyses to change your problematic access rights
- ✓ Scans, changes and reports scheduled for any point in time
- ✓ For file system, Active Directory and Entra ID
- ✓ Integration into other systems via Rest API
- ✓ Automation of employee processes with C-MAN add-on module
- ✓ Reports in PDF format, easily customizable to your own corporate identity using Word Office report templates
- ✓ Audit-proof logging of all changes made
- ✓ Multilingual web client with multi user support
- ✓ Data storage in MS SQL database
- ✓ Simple license model



# CARO-Suite

## CUSATUM - Together for more safety!

CUSATUM Service GmbH in Berlin/Brandenburg is a software and consulting company with a focus on access rights management and the automation of employee workflow processes.
As "makers from the very beginning", we developed 8MAN from Protected Networks. This is now called SolarWinds-ARM and is still a great success in German-speaking countries today.

AUTOMATE
SECURE
CARO-SUITE
VON DEN MACHERN
VON 8MAN
CARO
RISK ASSESS
LIVE

Today, we have combined our experience of one and a half decades in access rights management in our CARO-Suite. It is the necessary addition to ARM that was missing until now! The CARO-Suite supports companies in access rights management to fulfil common security and compliance guidelines.

**Mike Wiedemann, CEO**
His passion is customer satisfaction.
He also goes the "extra mile" for
satisfied customers!

**Ute Wagner, CDO**
A user interface must not only be
easy to use, but it must also be a
pleasure to use!

**Christian Schönfeld, CEO**
Converting my experience directly into
CARO - that is my claim! There is a
solution for everything. Let's do it!

Publisher

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SECURITY
MADE IN
GERMANY