epas

Enterprise Password Assessment Solution

The Future of Password Security is Here

EPAS Audit

The number one risk of any IT security architecture, no matter how thorough and extensive, remains the human factor – mainly the way users interact with the IT environment through the use of passwords. A number of effective measures can be taken to secure an IT security infrastructure, for example antivirus programs, firewalls or the implementation of encryption. Weak passwords in the authentication process still pose an unpredictably high risk. And this is what attackers will target.

60 % or more of passwords used in companies do not satisfy minimum security requirements.

EPAS is a solution developed by Detack GmbH and its Swiss partner Praetors AG. It is an on-premises SaaS solution for enterprise wide, automatic and regular password quality assessment and enforcement for a wide range of systems. EPAS addresses the overwhelming issue of maintaining secure passwords in large, heterogeneous environments containing Microsoft A/D, IBM System z, SAP and more. EPAS uses a self-developed, patent pending technology designed for enterprises, to extract all relevant password data from a target system, and uses these to assess the resilience of passwords against attacks. EPAS employs only legitimate cipher text extraction methods and therefore creates no system stability risk for the target.

Password Strength

Password policies commonly enforce length and composition requirements. Their effectiveness against current password recovery attacks has been proven to be very low. Attackers use many different methods in the attempt to compromise a password, the most common being the dictionary attack. Millions of words - from dictionaries, literature and passwords from internet password leaks – are used to create millions of password hashes. These hashes are then compared to those saved on a company server. A policy does not restrict the use of dictionary words and known derivations, i.e. substituting the @-symbol for an “a”. The true strength of a password – its resilience against attacks – can best be evaluated using structural entropy.

Universal Password Assessment

EPAS analyses the objective strength of passwords in selected target systems. Weak passwords are vulnerable to malicious cyber-attacks. EPAS is able to assess unsalted, statically salted, as well as dynamically salted passwords. It is customized for system specific encryption and evaluates personal, as well as technical and system accounts.

Detailed and Legally Compliant Reporting

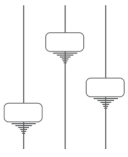
EPAS generates audit reports for each audit job. An executive summary provides full text and graphical data to visualize and explain the passwords’ overall quality. Included are recovery reasons, structure, compliance status and various other statistical data. Passwords are never displayed in clear text.

Built on 15 Years IT-Security Experience

EPAS was developed based on more than 15 years of IT-security auditing. The extensive experience of manual penetration tests sustainably shows that, without resilient passwords, all security measures are bound to fail. EPAS is unique and the only solution to offer a legally compliant view of your enterprise password landscape.

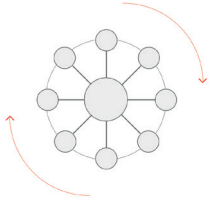
Designed for Enterprises

EPAS has been designed to meet the needs of modern enterprises. More than 30 different systems and databases, ranging from IBM, SAP, Oracle to Microsoft, are supported. Legally compliant reporting offers all security relevant password data whilst respecting the protection of personal data and satisfying workers councils´ requirements.



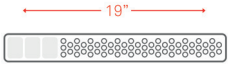
Customizable Password Assessment

EPAS audits the recovered passwords against two criteria: a customized password policy and an objective, entropy-based set of rule. EPAS can simulate various attack methods used by cyber criminals, such as dictionary or brute force attacks. Dictionaries are customizable regarding language and customer specific vocabulary or terms.



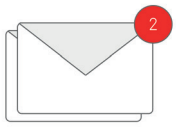
Password Re-Use Report

Recovered passwords are checked for multiple use. A password can either be used several times by the same user on different systems or one password can be used by several users. Both situations pose a high security risk and are subject to immediate risk mitigation measurements.



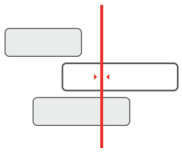
Technical and System Accounts

In addition to “heartbeat” users, all technical and system accounts are assessed and evaluated by EPAS. These accounts authenticate by using either very simple passwords, default vendor passwords, or no password at all. Yet these accounts usually have the highest privileges and are sometimes even exempt from a password policy. The authentication of technical and system accounts to other systems is one of the largest IT security risks.



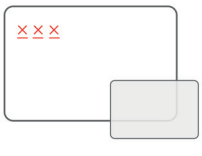
Notification by E-Mail

Automatic notification is used to prompt users to change their passwords if these are too weak or do otherwise not comply with defined audit parameters. The same feature automatically notifies the service administrator of a completed password audit job and the availability of a report.



Audit Jobs & Job Queuing

An intelligent job and queuing system permits programmable, regular password auditing with no job collisions. EPAS is highly scalable. It can process simultaneous parallel tasks and can audit millions of accounts on different systems over a single weekend.



Trusted Computing and Encryption

All data EPAS processes is permanently encrypted. Trusted Computing is used to seal the platform, an additional TPM chip secures software and data integrity by employing cryptographic methods. EPAS applies various hardware and software monitoring elements to detect physical or software intrusion attempts. Security failsafe mechanisms log events and shut down in case of intrusion attempts.

EPAS Enforcer

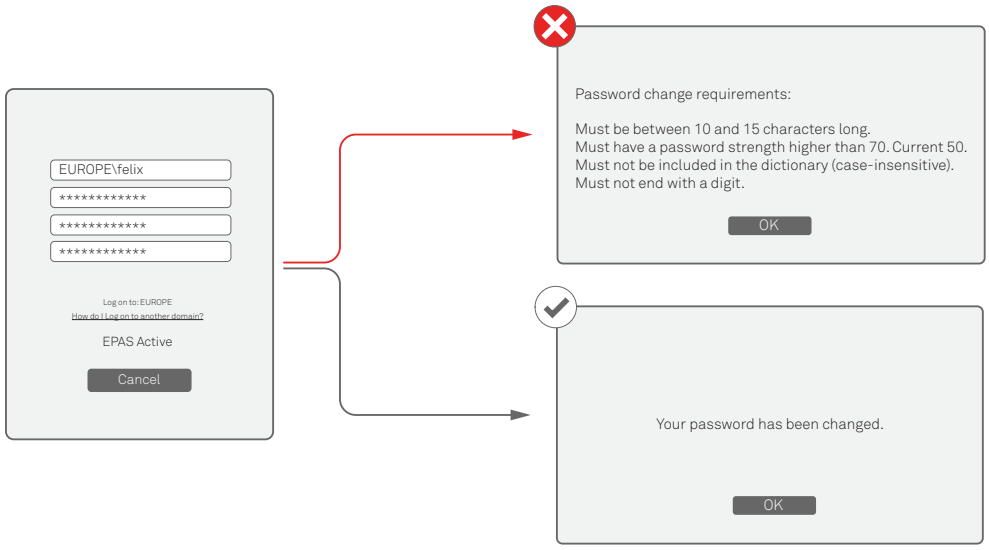
EPAS Enforcer is a password quality enforcement component, provided as a licensed feature of EPAS.
A single, high availability EPAS instance centrally manages password changes on all supported systems.
The initial release supports Microsoft products; support for additional platforms is currently in development.
EPAS Enforcer for A/D integrates as an LSA filter on the Windows Active Directory domain controllers and ensures that passwords meet defined security requirements when set or changed, in line with a centralized policy mandated by the risk category of the information they protect.

The new password is tested against the EPAS evaluation criteria and is accepted or rejected, depending on the defined security requirements. This means that formerly permitted passwords like “Password123” or “Secret!” are not accepted any longer by the computer.
If the password change attempt is unsuccessful, an optional feature of the EPAS Enforcer displays the failure reasons (e.g. “Password must not be included in a dictionary.”) to the end user.
The security requirements for a password result from the security classification of the data to be protected, based on customer specific measurements.

„With the EPAS Enforcer implemented, we are now able to control that, at the time of password change, a strong password is chosen – strong meaning resilient against real attacks.“

Workflow Password-Change Windows Active Directory

From a technical point of view, there is no difference to a standard Windows A/D installation for domain integrated computers. The EPAS Enforcer integrates seamlessly into the existing environment. Users continue to use the default, built-in Windows password change mechanisms to change passwords.



EPAS

EPAS is a service delivered via on-premises platforms, with no external access, which addresses the topic of weak or predictable passwords on an enterprise scale. EPAS conducts automatic, regular password assessments, helping to maintain secure passwords in large, heterogeneous environments.

A scalable solution, EPAS regularly audits millions of user accounts as well as service and technical accounts in over 30 countries. Objective password strength, length, character composition, and policy compliance, are some of the EPAS measurements.

1. User sends a password change request to the domain controller.
2. The domain controller invokes the EPAS filter, which retrieves additional user information, such as group membership, location and other relevant attributes.
3. The EPAS filter packs the information received and sends it over an encrypted, authenticated channel to the closest EPAS appliance. The EPAS appliance processes the username, group information, and any other known data and checks the password for policy compliance, calculates password strength and performs all other available policy checks defined for that particular account category. The result is returned to the domain controller.
4. The result of the password approval process is sent as a true / false statement to the user workstation.
5. If enabled, an EPAS credential provider installed on the local workstation displays the detailed reasons for a failed password change attempt, without requiring any connections to the EPAS appliance. The message is localized for the specific user language and region.

Sample Policy:

1. Repeatable Characters: Password must not contain a sequence of 3 or more consecutive repeated characters.
2. Length: Password must be between 10 and 15 characters.
3. Sequenced Characters: Password must not contain a sequence of 3 or more sequenced characters, such as usual keyboard sequences (e.g. “asdf”).
4. Strength: Password strength score must be above 70 (structural entropy).
5. Password history: Password must be different from the last 10 used passwords.
6. Dictionary: Password must not be found in a custom dictionary.

„EPAS: A practical, cost efficient, internationally proven solution which employs bleeding edge technology to enable the systematical increase of user account security – state of the art.“

On-Premises SaaS

EPAS is an on-premises SaaS solution and delivered through appliances which are integrated into the client´s data center. It is a “subscription-based service”, meaning all hardware remains the property of the service provider at all times. Software updates and hardware upgrades are included in the yearly subscription fee.

Supported Standard Target Systems

Microsoft Active Directory Accounts
Microsoft Windows Local Accounts
IBM System z - zSeries - S/390 RACF (z/OS, z/VM)
IBM System i - iSeries - AS/400
IBM System p - pSeries - RS/6000 AIX
IBM Lotus Domino Application Server
BSD Operating System
Linux Operating System
Sun Solaris – SunOS
Apache Basic - htpasswd
SAP NetWeaver - ABAP AS
LDAP Authentication Server

Supported Application Specific Data Storage

MSSQL System Accounts
MySQL System Accounts
Oracle System Accounts
PostgreSQL System Accounts
Sybase ASE System Accounts
DB2 Database Custom Application
Informix Database Custom Application
MaxDB Database Custom Application
MSSQL Custom Database Application
MySQL Database Custom Application
Oracle Database Custom Application
PostgreSQL Custom Database Application
Sybase ASA Database Custom Application
Sybase ASE Database Custom Application

> *“ EPAS has helped us to increase our password security tremendously – a security problem we knew about and had to solve, but before had no means to truly control or monitor.”*
>
> - A LEADING INTERNATIONAL INSURANCE COMPANY

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