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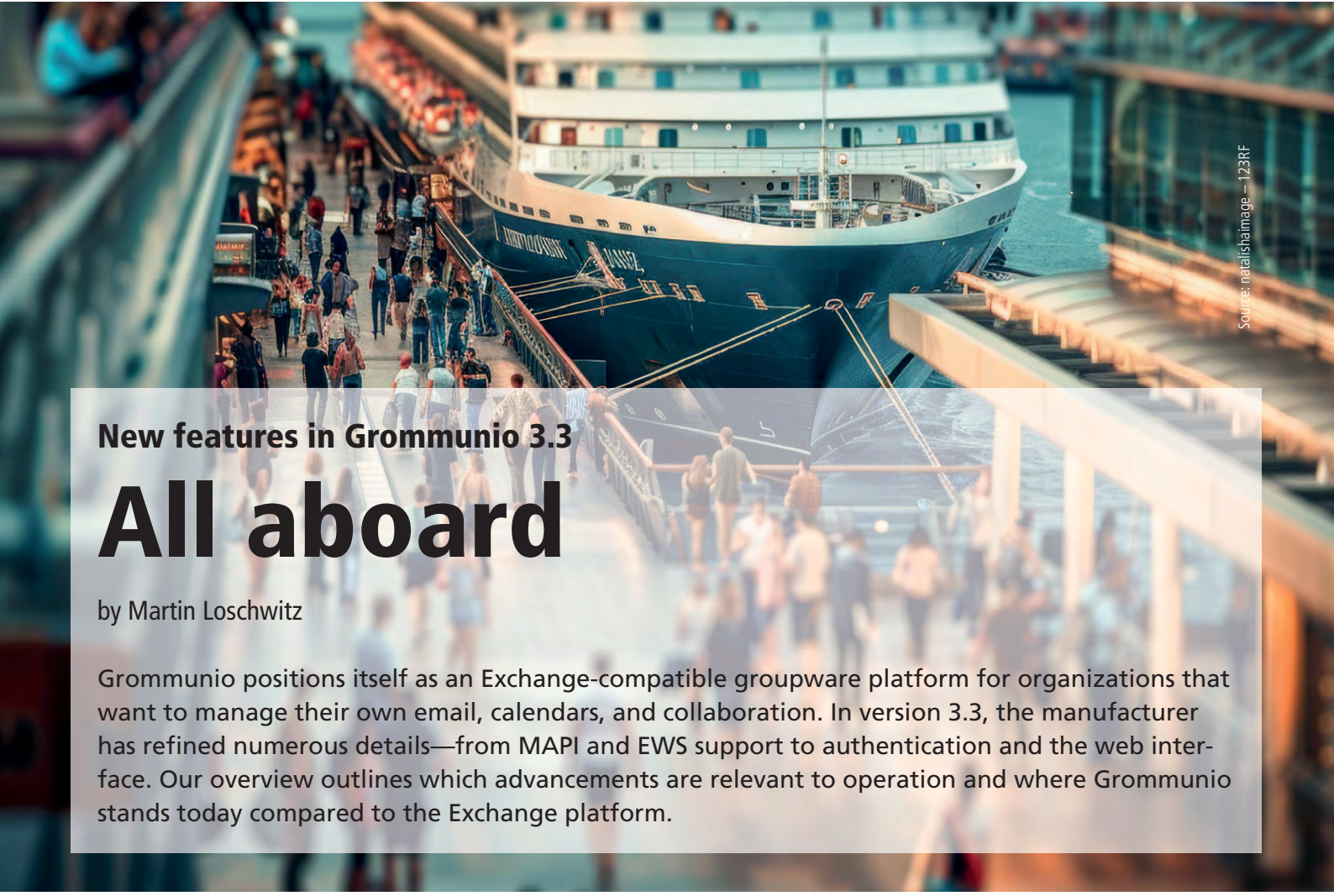

New features in Grommunio 3.3

All aboard

by Martin Loschwitz

Grommunio positions itself as an Exchange-compatible groupware platform for organizations that want to manage their own email, calendars, and collaboration. In version 3.3, the manufacturer has refined numerous details—from MAPI and EWS support to authentication and the web interface. Our overview outlines which advancements are relevant to operation and where Grommunio stands today compared to the Exchange platform.

Grommunio [1] is an open-source email and groupware platform that has evolved in recent years from a niche produinto a serious alternative to Microsoft Exchange. Historically, Grommunio grew out of the Grammm project, which w itself as a sort of unofficial successor to Kopano. It initially took over the web GUI, but also completely rewrote all components of the software, including the software architecture. Kopano is no longer part of the Grommunio code. And yet the idea behind it was sound.

Grommunio uses the Kopano calendars, but approaches them with a clear vision: its developers aim to enable the use of email, calendars, contacts, and collaboration services within an environment that works with both traditional clients—particularly Outlook—and modern workflows, while remaining largely compatible with Exchange. This brings Grommunio more into the spotlight, particularly in the context of digital sovereignty.

Compatible yet independent

To this day, Grommunio's primary focus remains on compatibility with Microsoft standards, with a particular emphasis on providing seamless support for Outlook and other Exchange-compatible clients. This is possible because Grommunio replicates large parts of the MAPI (Messaging Application Programming Interface) protocol while also fully implementing Exchange Web Services (EWS).

For a long time, MAPI was at the heart of communication between Exchange and Outlook clients; EWS complements this with a modern, service-based API model for web services. This combination makes Grommunio a key component for organizations that want to regain digital sovereignty over their email and groupware infrastructure without sacrificing the full functionality and integration of Exchange clients.

Architecturally, Grommunio is divided into several key components. At its core is Gromox [2], the actual mail and groupware server. It implements the communication protocols, data management, authentication, and policies that clients access. Gromox hosts the email queue, calendar and contact management, and the APIs for all access protocols in the Grommunio portfolio. The component is designed to provide both traditional IMAP and SMTP services and support modern EWS and MAPI interfaces.

There are various front ends based on this. One of the most important is Grommunio's web app: a web-based user interface (Figure 1) that combines email, calendar, contacts, and collaboration features within a modern UI framework. The web app isn't just a nice-to-have—it's a fully-fledged, productive workspace.

With version 3.3, Grommunio exemplifies the product's growing maturity and the developers' clear focus on protocol compatibility and stable operation. While earlier releases often sought to impress with a host of "big-bang features," version 3.3 stands out not only for several major new features but also for targeted enhancements to existing capabilities—particularly in the areas of Exchange compatibility, performance, and user-friendliness.

Improved MAPI support

A key focus of Gromox 3.3 is the expansion of its MAPI support. Historically, MAPI is the protocol that Microsoft clients such as Outlook and many groupware applications use internally. This is a comprehensive framework whose functionality has evolved across many versions of Exchange and which places high demands on protocol compatibility.

With version 3.3, Gromox takes a step forward in this area. The developers have replicated numerous MAPI commands that were previously only partially supported, thereby significantly improving compatibility with MAPI-dependent clients. This applies to both traditional legacy commands and more modern functions. Since many enterprise clients—particularly various versions of Outlook—rely on a wide range of MAPI functionality, Gromox 3.3 integrates with them much more seamlessly than before.

Notable examples include improvements to the Admin API, support for advanced folder operations, and support for more complex search semantics. On top of that, the developers have optimized Gromox so that it now works just as well with shared-nothing storage as it does with shared storage. CephFS is therefore just as suitable for use as scalable storage as any standard POSIX file system, even in large-scale environments.

Stability and performance with Gromox 3.3

In addition to protocol extensions, Gromox 3.3 includes a number of technical improvements that may not seem particularly impressive but make operation much easier. Gromox's internal event processing has been redesigned to eliminate redundant operations and avoid unnecessary repetitions. In high-load environments or those with a large number of concurrent accesses, this implicitly results in noticeably more stable performance. In particular, the handling of server-push events and change notifications from the server to its clients has been improved. According to the manufacturer, this significantly reduces the risk that clients will see an inconsistent state of a user's data record in Grommunio.

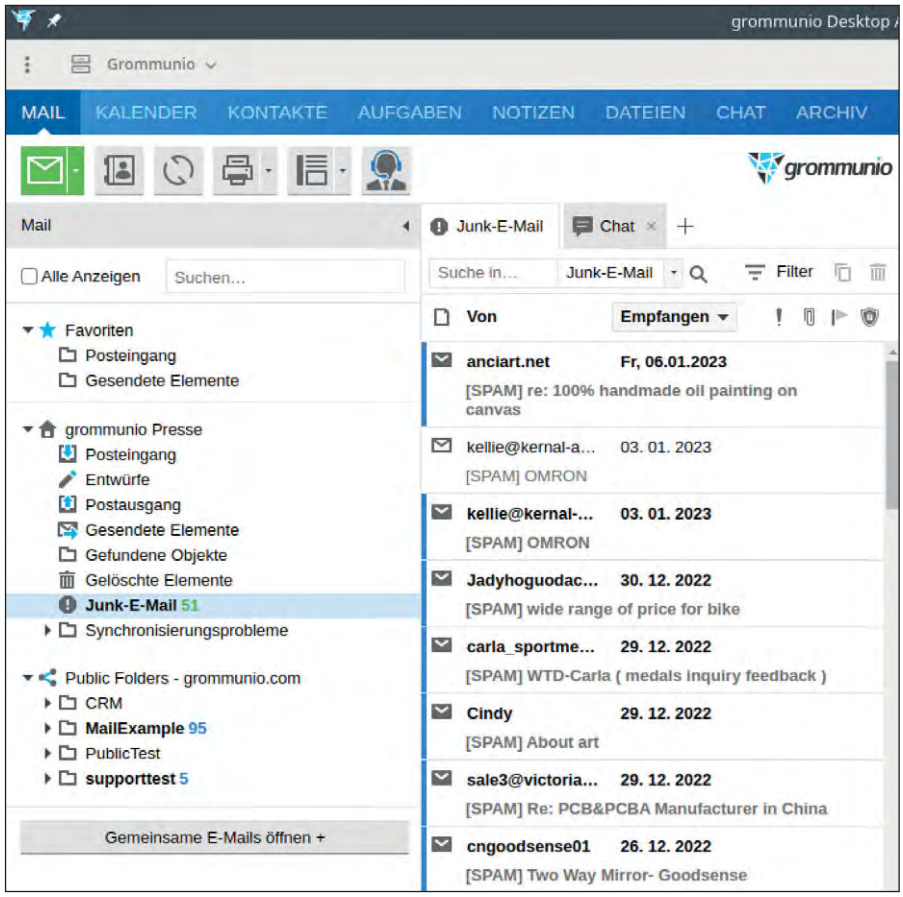

Figure 1: Grommunio can be used with clients such as Outlook or Thunderbird, but also includes its own multifunctional GUI as a point of access to the groupware.

Gromox's handling of IMAP sessions has also been significantly revamped. Since Grommunio supports IMAP alongside MAPI and EWS, consistent behavior across all protocols is of paramount importance. Gromox 3.3 therefore includes improved session management that responds in a less resource-intensive manner to sudden disconnections in IMAP, while also ensuring that such "stuck" sessions do not cause memory leaks that lead to inconsistent views in the other interfaces.

Focus on Exchange Web Services

Of course, compliance is also an issue for Gromox. Version 3.3 includes numerous minor fixes in the authentication layer and session management. This increases the Gromox server's resilience to unusual client behavior or protocols that may have been implemented incorrectly on the application side. Gromox now works better and more reliably, especially in the MAPI environment, where most programs have historically been very tolerant of minor protocol deviations. Users notice this in the form of fewer disconnections and more stable sessions over longer periods of time.

While MAPI remains the foundation for Outlook compatibility in many environments, in practice it is often EWS that determines how well a groupware platform performs in day-to-day use. The reason lies in the variety of clients: Not every user works with Outlook on Windows. This is exactly where EWS comes into play as a service-based interface that allows clients to access calendars, contacts, tasks, and mailboxes without relying on MAPI semantics. Thunderbird, for example, can also be connected to Exchange via EWS.

The latest developments in Gromox—and particularly surrounding Gromox 3.3—show a clear focus not only on providing fundamental support for EWS, but also on specifically expanding its range of features.

Client diversity and GAL Sync

A good example is support for eM Client [4], often referred to simply as "eM". The

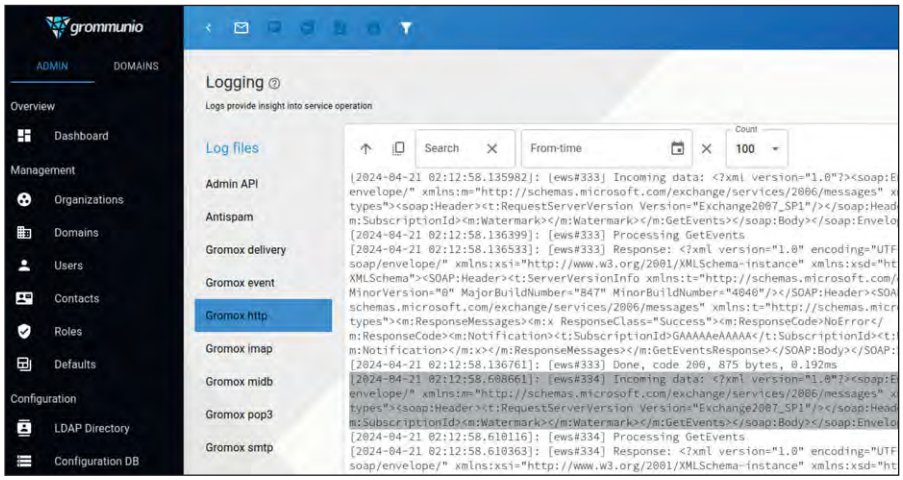

Figure 2: As shown in the log file, EWS offers groupware functions via an HTTPS interface. Grommunio 3.3 offers improved support for this and can now work with eM Client, for example.

application is used in many companies and government agencies as an alternative to Outlook, particularly in situations where Exchange compatibility is required but there is a need to reduce or avoid Microsoft licenses. eM Client supports EWS and expects Exchange behavior in return. In the past, minor deviations in Gromox's EWS implementation quickly led to visible problems such as slow synchronization, inconsistent calendar views, or error messages that were difficult to interpret. Gromox 3.3 now officially supports eM Client.

Another aspect in the context of EWS is the synchronization of the Global Address List (GAL). Exchange users expect address books, groups, and contact information to be consistently available across all devices. Grommunio also faced typical challenges in this area, which the manufacturer specifically addressed in version 3.3. GAL synchronization via EWS has been further improved and now behaves more consistently across different applications.

In addition, Gromox 3.3 has also revamped the handling of EWS events. Changes such as new messages, schedule updates, or folder changes are signaled more reliably and place less load on the server. Notifications remain consistent even when a user is using multiple clients simultaneously, such as between desktop and mobile device. This is particularly beneficial for calendar features and reminders, which now work more reliably than before.

OpenID Connect, Kerberos, and Keycloak

Anyone who runs a platform like Grommunio is always dealing with identities, permissions, and access paths—in other words, traditional rights management. Groupware is therefore always an integral part of the security architecture. With Gromox 3.3, the manufacturer has also completed support for OpenID Connect (OIDC) via Keycloak [5] at platform level and significantly improved existing features. This is noteworthy because OIDC has long since become the standard in many organizations, not only for web applications but also as a general integration pattern for authentication. Where LDAP and Kerberos once dominated, identity providers (IdPs) now issue tokens, enforce multi-factor authentication (MFA), and control access through defined policies. Groupware must take this into account.

In practice, Keycloak is virtually indispensable in this context. The software has established itself as the de facto standard for identity and access management in the open source community, particularly for organizations that take digital sovereignty seriously but still require a full-featured IdP with MFA, a role-based model, and multi-client capabilities. Grommunio is capitalizing on this trend and integrating Keycloak as a core component of the platform. This is also driven by the need for Grommunio to integrate various backends for user management. For example, the tool has its own user database within its metadata, but can also be connected to the Active Directory via LDAP and supports Kerberos. Keycloak acts as a central broker in this process.

It is important to note that this integration is not limited to the commercial edition. The community version of Grommunio now also fully supports OpenID Connect. The manufacturer provides a fully-featured, integrated Keycloak that can act directly as an IdP. If you already operate a central identity platform, you can also connect Keycloak externally.

What is particularly interesting is that Grommunio takes its own approach to Keycloak, one that is designed for true multi-client capability and includes its own extensions to support this. This is crucial in multi-tenant scenarios, such as those involving service providers, municipal IT service providers, or in corporations that operate organizationally separate units. In practice, the same instance of Grommunio can be connected to different LDAP instances via the same Keycloak, with the users of each organization being visible only to that organization. Grommunio also uses its own permission flags here, which are managed by Keycloak.

Exchange 5.5 and the legacy issues of the 90s

Another noteworthy point is one that initially seems anachronistic: Grommunio now handles MAPI commands from a bygone era much better, such as the complex constructs from Exchange 5.5 in the late 90s. The fact that a modern groupware project would even deal with commands from that era sounds absurd, but there is a good explanation for it. For even though MAPI is now fairly standardized across the board, it still carries the baggage of the past. Early versions of Exchange in particular often relied on complex behind-the-scenes mechanisms related to protocols and protocol compatibility in order to provide a specific feature. Microsoft has continued this practice over the years to avoid disrupting existing functionality. Gromox 3.3 therefore provides support for several of these legacy MAPI commands—though not directly via MAPI, but by means of a compatibility layer on top of the EWS layer. Any existing features are therefore still available in the current version of Grommunio, albeit with a new look, and can be used.

Kerberos in the community edition

In parallel with the OIDC integration, Grommunio has also introduced Kerberos authentication in the community edition. At first glance, this may seem like a step backward, but in practice it is particularly relevant for traditional enterprise environments. This is because Kerberos remains the cornerstone of single sign-on in many organizations, particularly in Windows-dominated environments where the Active Directory is not merely a directory service but the core of the identity model.

In this context, Kerberos support means that Grommunio can be connected in such a way that users can navigate using familiar SSO mechanisms without the need for additional standalone login products. This is particularly important in migration scenarios. Replacing Exchange isn't just about swapping out a mail server; it involves replacing an entire identity and permissions ecosystem that has evolved over the years. Kerberos in the community edition lowers the barrier to entry and makes Grommunio more compatible. All in all, this development demonstrates that Grommunio is not only working on protocol compatibility but also on its ability to integrate into modern IAM architectures.

Compatible with Debian and Ubuntu

As much as groupware is defined by protocols, clients, and features, in practice, success or failure often hinges on a seemingly trivial factor: namely, the answer to the question of which distributions allow the software to run smoothly and reliably. Especially in the Linux environment, this is not a minor issue, but a key factor for acceptance. Anyone looking to implement Grommunio in businesses or government agencies must support SLES or RHEL as well as Ubuntu Linux or Debian GNU/Linux.

This is precisely where the manufacturer has recently stepped up its efforts. Grommunio hired an official Debian developer whose specific role is to improve Grommunio's—and in particular Gromox's—Debian packages for Debian GNU/Linux and Ubuntu, and to ensure their long-term functionality. This is a clear signal that Debian and Ubuntu should no longer be viewed as a "community side track," but rather as a strategically important target platform. For the administrators of these systems, this means less work and fewer debugging issues caused by faulty packages.

Moving away from the Kopano legacy in the web interface

No matter how robust and technically sophisticated a groupware platform may be on the backend, it is often the front end that ultimately determines acceptance. With groupware, it is often no longer a local client like Outlook or Thunderbird, but rather a web client. This was precisely where Grommunio had long carried a burden, since the web interface originally came from the Kopano environment.

This web GUI was functionally sound, but its design and interaction clearly reflected an earlier generation of web applications. This legacy also shaped the early versions of Grommunio, as the web app originated as a fork of Kopano. As a result, Grommunio lagged behind platforms similar to Exchange for a long time in terms of user interface.

Modernization instead of redesign

Grommunio began gradually modernizing the web app in earlier versions, with the manufacturer focusing on continuous improvements rather than a radical redesign. As a result, the Grommunio GUI now responds much more smoothly than before—a factor that experts often refer to as "snappiness." More modern UI elements and a redesigned icon set give the interface a more contemporary look.

The most noticeable new feature in the latest update is a true, configurable dark mode (Figure 3). Unlike themes that are simply recolored, Grommunio also takes more complex UI elements into account and avoids illegible displays. The dark mode also dynamically adapts to the user's desktop environment and is automatically enabled when the browser uses a corresponding color scheme.

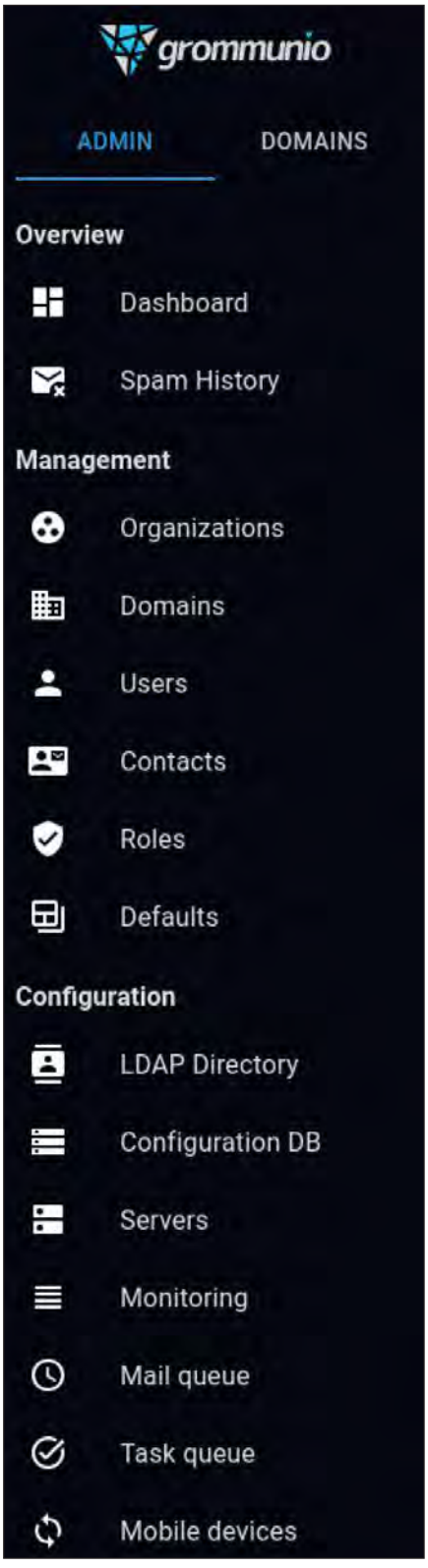

Figure 3: For the first time, Grommunio has a true dark mode.

Summary

With Gromox 3.3, Grommunio is consistently continuing its evolution toward greater technical maturity. The focus here is not on new function blocks, but rather on stabilizing and enhancing existing core functions, especially those related to

MAPI and Exchange Web Services. This is particularly beneficial in everyday use, such as when using different clients or in high-load environments.

At the same time, Grommunio is improving its compatibility with existing infrastructures. Expanded support for OpenID Connect, Keycloak, and Kerberos simplifies integration into existing identity and security architectures, making deployment feasible in both traditional enterprise environments and multi-client scenarios.

Overall, Grommunio positions itself not so much as a radical alternative, but rather as a technically interoperable, Exchange-compatible groupware platform. For organizations that need Exchange functionality but want to rely more on open-source components, flexible operating models, and greater control, the current version of Grommunio is a viable option. *(ln)*

Links

[1] **Grommunio**
it-a.eu/p4z84

[2] **Gromox on GitHub**
it-a.eu/q4p31

[3] **Gromox 3.3**
it-a.eu/q4p32

[4] **eM Client**
it-a.eu/ks2p3

[5] **Keycloak**
it-a.eu/iap62