



Electronic Communications Portfolio

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Electronic communication is a standard requirement in today's enterprise environment, given the rising client-side demand and its near-instantaneous nature. On the other hand savings can be significant already on a short term.

Digitally signed documents are binding under Hungarian jurisdiction, eliminating the need for paper-based solutions in legally accepted correspondence.

We are pleased to present DBX's electronic communication solution: Hammy.

The increasing number of available email addresses in enterprise partner databases offers an invaluable marketing opportunity. Direct email contact of clients is a proven and effective way of expanding business. Hammy, through its advanced marketing features, lets your business exploit this resource. Hammy EDM lets you orchestrate entire marketing campaigns without technical expertise, or developer involvement.

Document delivery however, is only half of the picture. Document storage, retrieval and sophisticated searching are also vital to success. Doky, a document management solution, completes DBX's portfolio.

Introduction to Hammy

1 billion saved and counting.

Hammy Features

- Robust mailing.
- Electronic invoicing.
- Authentication (digital signature, timestamp).
- Bounced mail management.
- HTML and TEXT support.
- Template editor.
- Message search interface.
- Scalable architecture.
- Administration interface.
- Monitoring, statistics.
- Webservice, JDBC, JMS integration

Electronic messaging

Development started back in 2009, Hammy is now in use at five large enterprises. A few notable points from the last four years of Hammy:

- Over 9 million emails sent.
- More than 500 supported document types.
- Near 100% customer satisfaction.
- HUF 1 billion saved on communication (and counting).
- Throughput: up to 100.000 emails per hour.

Hammy uses standard protocols (SMTP, POP3, IMAP) and is easy to integrate into the standard business environment.

Deliverable items typically originate from back-office systems, or even third party applications. Documents are retrieved from file servers or Document Management Systems..

Authority-approved

Hammy fulfills all legal requirements:

- Documents are digitally signed, thus legally binding.
- NAV-compliant invoice generation.
- PSZÁF-approved message tracking: failed and bounced messages are logged, traditional communication forms initiated on request.

Bounced messages are paired with the original delivery. The source systems or applications are notified of the bounce and it's cause.

Hammy even offers workflows for hand-written replies. Such correspondence is stored in a database and forwarded to a predefined address.

Hammy offers a sophisticated search engine for outgoing messages (see fig. 1). Messages are searchable by email, recipient name, attachment, policy reference, date and state by default. Sent messages are also downloadable.

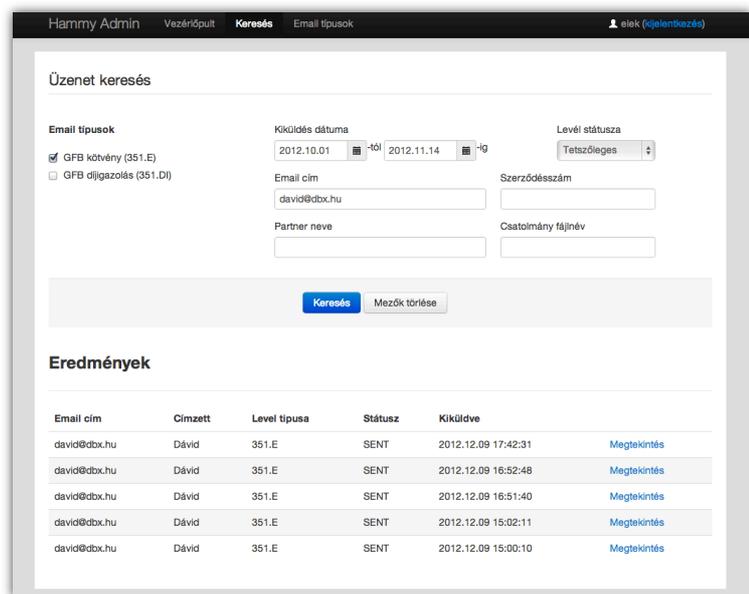


Figure 1: search interface

Templates and personalization

Hammy provides a graphical interface for business users to manage message types. The interface allows the user to create, modify or disable message types. Each type also has a template through which the final message is dynamically generated. Naturally the templates are also editable and versioned to provide maximal flexibility. See fig. 2 for a screenshot of the template editor.

Hammy produces both HTML and TEXT messages. Styles for HTML messages are highly configurable, so it's easy to blend messages to your company's image.

Supported platforms

App servers:

- IBM Websphere
- Apache Tomcat
- Glassfish 3

Databases:

- Oracle
- MS-SQL
- IBM DB2
- MySQL

Message Queues:

- Websphere MQ
- Active MQ

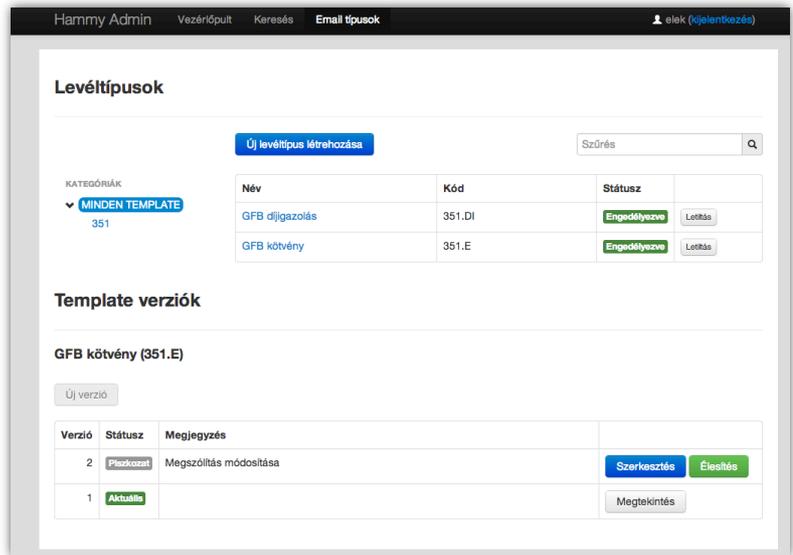


Figure 2: Message types and templates

Administration

With a high degree of parallelism Hammy can achieve a throughput of 100.000 messages per hour. Hammy's modular architecture enables fine-grained performance tuning, e.g. the degree of parallelism can be set on modular level.

Hammy administrators can log in to the administration interface (see fig. 3), to manage individual modules.

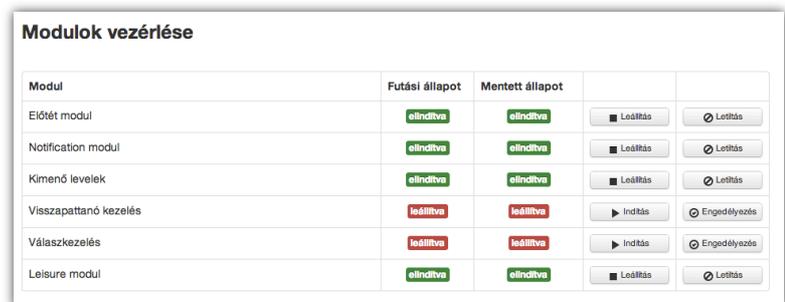


Figure 3: Module management

Direct Marketing Campaigns

Hammy EDM, Hammy's separate EDM module, let's you create and evaluate marketing campaigns. An easy to use web interface helps marketing teams in the campaign lifecycle.

Starting a Campaign

Defining a campaign is as easy as to create an HTML message by using one of Hammy EDM's pre-defined templates or creating a new one from scratch. A WYSIWYG editor is in place to help.

The addressee list, with optional additional referable information (such as name, age, gender, etc.), can be attached to the campaign, via CSV upload.

Sending marketing emails

Campaign emails are sent by Hammy. Logging of follow-up events, such as message openings, clicks, unsubscribes are facilitated by Hammy through Hammy Public, a public Hammy module, designed to be accessible on the Internet (See fig. 5.).

Campaign Evaluation

The EDM interface allows constant monitoring of the campaigns. Open rates, bounce rates, click stats are available on domain and link basis. Statistics and subscription information can also be exported for use in business intelligence software or other applications.

Hammy EDM features

- HTML email editor
- Email testing with a number of browser engines
- Address lists, newsletters, subscription management
- Campaign scheduler
- High throughput (via Hammy)
- Reports, statistics

Kampány szerkesztése

Figure 4: Email editor interface

Document Management

Doky, our document management solution provides enterprise-level document storage and search functionality. Smooth integration to your business environment is ensured by use of industry standard interfaces and architecture. Doky is shipped with a slick graphical user interface that is easy to use for non-technical staff.

Doky's flexible and feature-rich metadata support gives operators a powerful tool for defining data schemas, ensured searchability and consistency.

Built-in versioning makes it easy to track the history of your documents. Relation management is in place to enable normalization of your data. (Say a number of messages share the same attachment. The attachment may be put to a document on it's own to save storage space and ensure consistency and then linked to the documents of the messages.) Relations are traversable on the graphical user interface.

A powerful yet simple search interface is incorporated to the graphical user interface. Metadata and field indexing guarantees quick search results even for complex queries. The search results are either downloadable or viewable in the browser window. (See fig. 5)

Doky features

- Service-oriented interface for 3rd party applications.
- User friendly interface for business users.
- Highly configurable schema through GUI.
- Enterprise-level authentication and authorization.
- Versioning and relations.

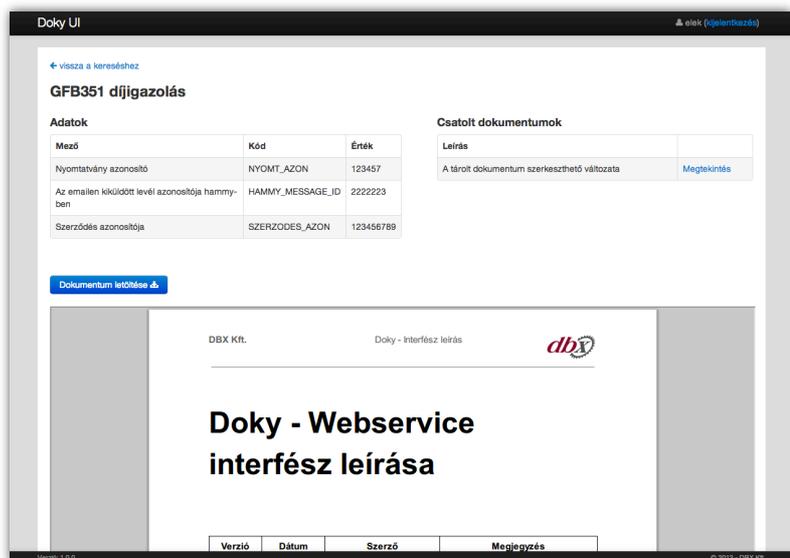


Figure 5: document viewer

Standard authentication methods guard your data from malicious attackers. Login to graphical user interface is handled by Doky with the help of LDAP, while the service layer uses token-based authentication.

Our highly configurable authorization module controls the accessibility of your documents. A hierarchical structure of document types and user roles allows you to blend a configuration that meets your company's access and data security requirements.

Systems and connections

For an overview on how the elements of DBX's communication portfolio typically integrate into an enterprise infrastructure see fig. 6.

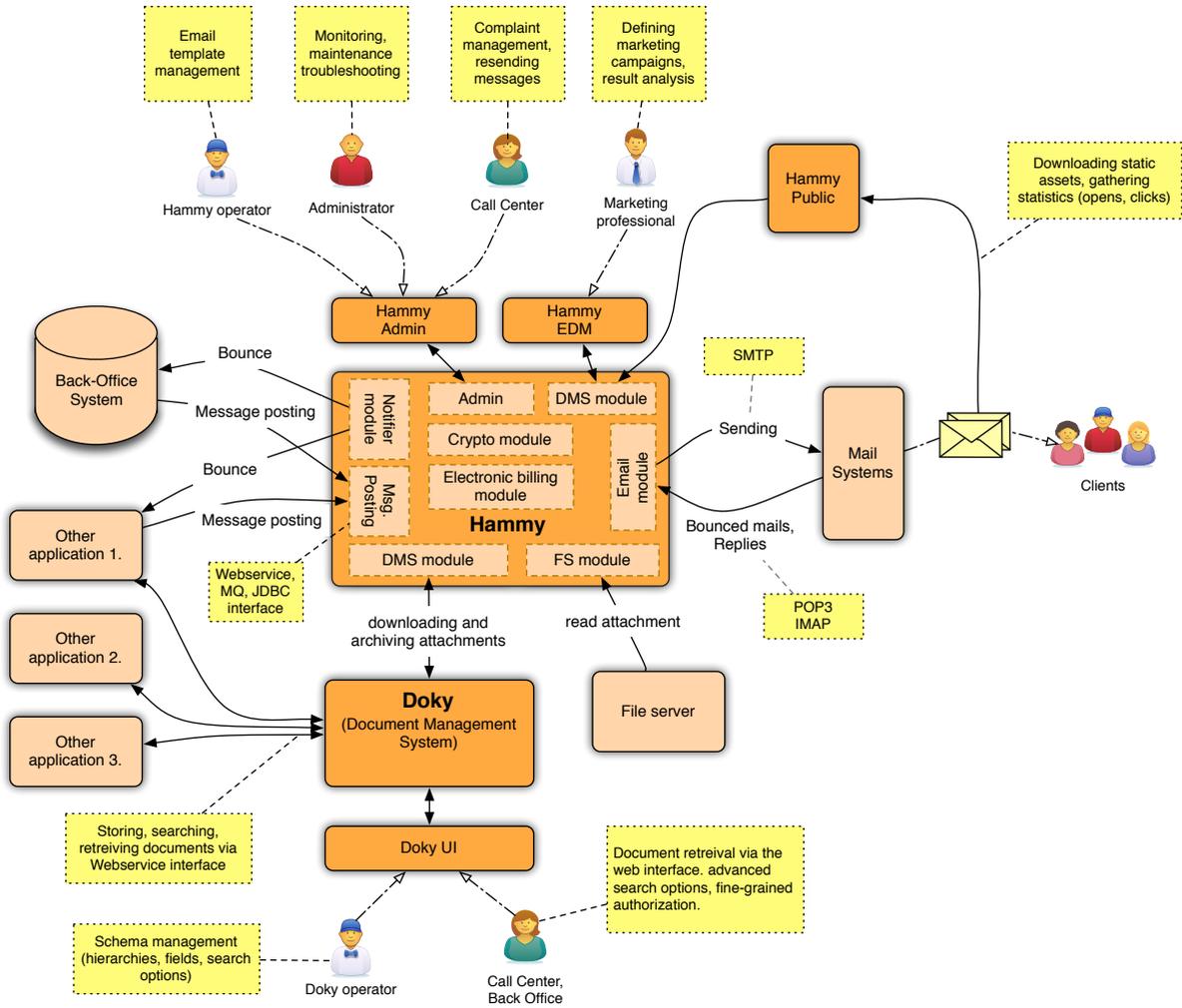


Figure 6: systems and connections