



**mambo<sup>+</sup>**

# domain monitoring and management

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Service Specification

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## Service Specification

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**PRODUCT SPECIFICATION**

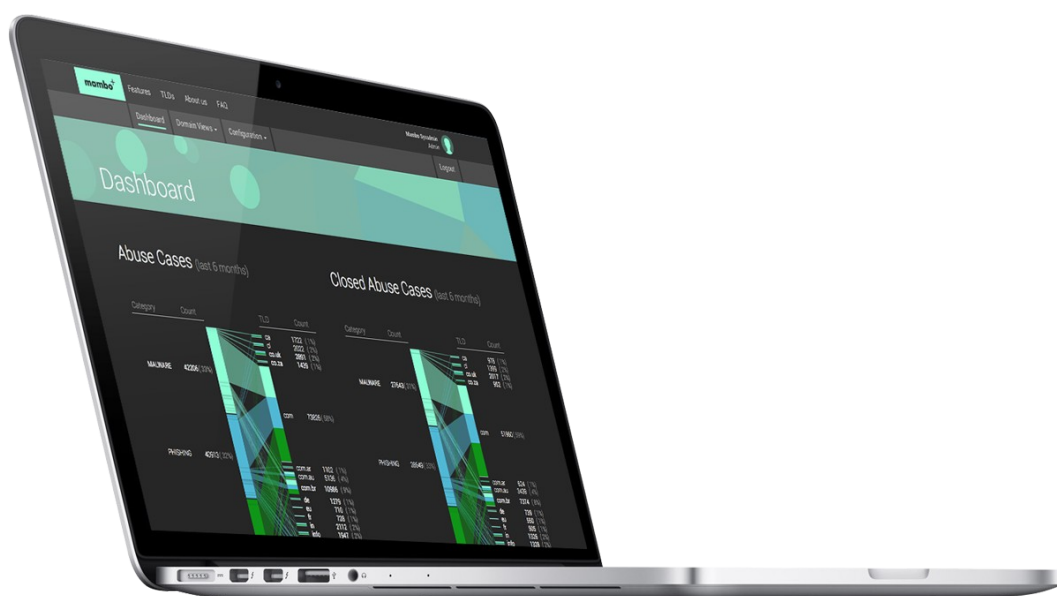
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## Service Specification

### Standard Feature List



#### ABOUT mambo<sup>+</sup>

##### Overview

**mambo<sup>+</sup>** is the solution for monitoring domain portfolio or zones. Users, such as Registries, Registrars, Resellers, Registrants and Interested Parties, profit from its user-friendly presentation and handling of processed information. This documentation describes the service specifications of all included components.

##### Flexibility and Modularity

Apart from the standard features, which are listed below, **mambo<sup>+</sup>** can be enhanced with individual features, specially tailored for the customer. A modular set-up assures that users benefit from individually designed and developed product features.

##### Design and User Experience

During the development the design decisions are always based on ensuring stability, availability and reliability of the product. Compromises are not accepted as a matter of principle.

##### ICANN compliance concerning Spec 11 3(b)

**mambo<sup>+</sup>** fulfills the requirements for a new gTLD to comply with Spec 11 3(b) of the Registry Agreement. Its permanent monitoring of zones identifies abuse cases such as Phishing, Malware, Botnets or Spam. The reporting functionality of **mambo<sup>+</sup>** provides all necessary data for ICANN audits.

##### Data Security

Data is stored on servers located in Europe. Therefore, data storage complies to the high standards of European Data Protection Laws. Additionally, Knipp Medien und Kommunikation GmbH as the provider of **mambo<sup>+</sup>** holds a DIN ISO/IEC 27001 certificate.

##### Reselling and White Labeling

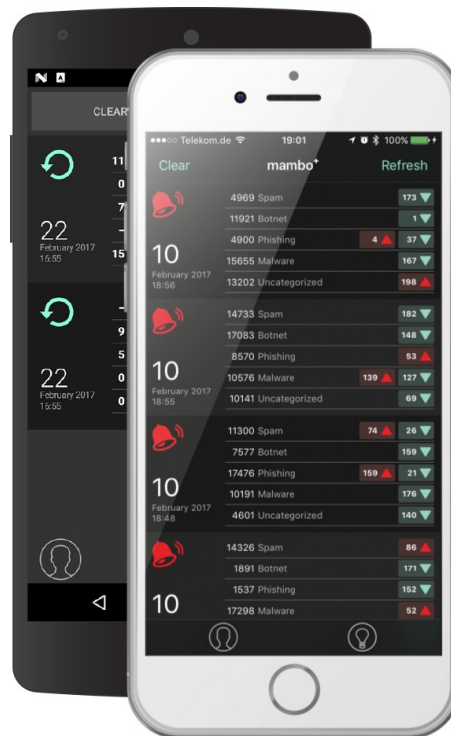
**mambo<sup>+</sup>** can be resold as an add-on service to customers. In some reselling scenarios it makes sense to hide the brand **mambo<sup>+</sup>**. Therefore it is possible to brand the web interface with the name of a third party, such as a Registrar, a law firm or a consultancy company.



**mambo<sup>+</sup>** helps to get an overview of domain portfolios and provides in-depth details for each domain

## PRODUCT SPECIFICATION\*

**mambo<sup>+</sup>** is a service to easily **monitor and manage domain specific information**. The provision of information to users is achieved by actively checking and processing data from different sources, **e.g. abuse information or technical domain data**. In general, **mambo<sup>+</sup>** strictly provides the **most recent information** available while keeping all **historic data** available for later reference. A simple, yet **powerful web interface** in conjunction with **periodic reports**, immediate **e-mail alerts** and an **easily accessible RESTful API** are provided as ways how customers can access their data.



### General Features

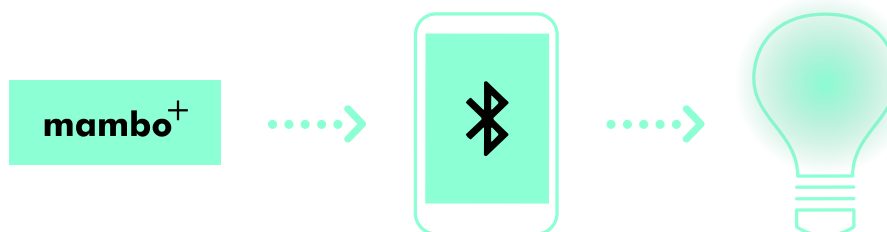
- **workflow support** via **contact configuration** and **automated notifications**
- individually developed features due to **modular set-up**
- personalized monitoring activities via a **sophisticated configuration system**
- easy examining and review via **full history support** for stored domains
- built-in support for abuse case reporting via a comprehensive **action tracking system for audit trails**
- full support for **IDNs** (Internationalized Domain Names)
- fully **automated download of zone files** from the CZDS (Centralized Zone Data Service) or via zone transfer (AXFR)
- automatic (periodic) generation of **reports** which can be individually configured and directly sent to the respective recipient
- integrated **archive of reports** generated in the past
- configuration of **immediate e-mail alerts** about changes in the domain portfolio
- easily achieving **compliance with Specification 11 3(b)** of the ICANN Registry Agreement

\*Services may vary from country to country.

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## Data Accessibility

- **web-based user interface**
  - password protected web interface that offers an extensive set of information and tools
  - **easy to use**, even for unexperienced users
  - access to individual **statistics and benchmarks** on customers' domain portfolio
  - access to list of **domains within customers' portfolio** including all attributes connected to domains and filter possibilities
  - access to **domain details** showing history of attributes and actions taken
  - access to **configuration** to set-up and change user details, contacts, system set-ups, alerts and reports
  - access to **report history**
  - **intuitive workflows** satisfying the needs of both casual and experienced users
  - possible enhancement to **multi-linguality**, user could then switch between languages
  - secure access, only through **https**
- robust interface with **secure session management**
- use of **AJAX** to reduce latency and server reloads
- **domain portfolio reports**
  - **clearly arranged** breakdown and details
  - download or sending of **PDF and CSV files**
  - **immediate reports** on domains in filtered domain view
  - individually configured reports for **periodic generation**, for example daily, weekly, monthly or yearly
- **filter-based alerts**
  - individually selected domain changes can trigger fully **automated alerts**
  - immediate notification of **respective contact persons**
- **API**
  - **secure communication** over HTTPS to our servers
  - **modern and extensible RESTful API**, specified and documented using OpenAPI



- **mobile app**
  - immediate **notification** if an abuse case has occurred or has been removed
  - individual mobile app for **Android** and **iOS**
  - additional possibility to fulfill the notification requirements of ICANN Spec 11 3(b)
- **smart bulb**
  - **calls attention to changes of abuse cases**
  - after signaling that a new alert has been received (blinks yellow) the bulb blinks red if a new abuse case has been detected and green if an old abuse case has been removed
  - connected to mobile app via **bluetooth**

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## Data Collection and Provisioning

- **integration of different types of information sources:**
  - **push sources** provide data which needs to be examined and processed
  - **pull sources** are inquired domain by domain based on the domain portfolio or zone of the customer
  - **free sources** transmit data without charges and are therefore also provided to the free account
  - **non-free (premium) sources** supply premium content, but have to be payed separately
  - **non-public abuse information sources** can be added to the system by registries for exclusive use with their mambo<sup>+</sup> account (data will be hidden from other mambo<sup>+</sup> customers)
- **processing of domain related information**, such as, but not limited to:
  - **abuse information** concerning for example Phishing, Malware, Botnet or Spam Cases
  - **ranking information** such as Majestic Ranking
- **domain life cycle information** such as registration dates or transfer information
- **usage information** for example if mail servers are configured, websites are hosted or redirects are in place
- **technical information** such as information on SSL certificates and their validity or name servers that are configured
- **provisioning of domain-related information** (registration required)
  - **free, but limited data access and functionality** is provided for users with up to a certain number of domains
  - paying customers receive **full standard data access and functionality including newly developed standard features**
  - paying customers subscribed for **additional modules** gain additional data access and/or functionality

## User Management and Role Concept

- **multiple user accounts** per business entity
- differentiation between **registry users** and **domain portfolio owners** (such as registrars)
- user-definable **contacts**, e.g. for easy administration of report distribution lists
- **assignable roles** for separate management tasks, e.g.:
  - **modification** of domains under management
  - **analysis** of domain portfolios and domain abuse
  - **administration** of contacts
  - **creation** and **deletion** of periodic reports and alerts



## SYSTEM SPECIFICATION

The system to deliver the mambo<sup>+</sup> services is designed to provide high availability while allowing for short response times for users of the system. A **powerful hardware stack** hosts the **modular software stack** that is built as a combination of cutting edge but well-tested frameworks for the **processing of huge data volumes** and a solely in-house developed **business logic back-end engine** integrated with **newest front-end technology**.

### System Architecture

- **two sites**, one main site (Dortmund, Germany) and one mirror site (Amsterdam, Netherlands), geographically separated for the event of a local force majeure that makes one of the sites unavailable (planned)
- **fail-over strategies**, either by the software or cluster technologies (where applicable)
- **data backups** (incremental and full)

### Software Architecture

- back-end completely **developed in Java** with RDBMS capable of processing huge data volumes
- **modular and configurable service oriented architecture** with non-monolithic structures
- **micro services** for different parts of the software system, e.g. for information gathering, information processing, information storage and information provisioning
- several layers of **abstraction to allow for simple integration of new content** and customer oriented solutions
- scalable for **load balancing and redundancy**
- **multi tier architecture**, to separate business logic from front ends
- customizable **template engines for reports**

### Data Storage

- data is stored on **servers located in Europe**, hence protected by European and German data protection directives, laws and government
- extensive measures to assure **security, validity, accessibility and integrity of data** are in place
- physical and remote **access to servers is strictly regulated**, protected and subject to security screening
- mix of **high speed, high availability and highly durable** data storage solutions
- certified secure operation under **DIN ISO/IEC 27001** standard



mambo<sup>+</sup> is operated under the high security standard ISO/IEC 27001



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**mambo+** is a product of

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