One API to Rule Them All: The New REST-API

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Our vision for the REST-API (1/4)

- An API which covers the entire functionality of the GUI and the command line
  - This is an ambitious goal which we have set ourselves
  - We’re currently making progress on a steady pace
Our vision for the REST-API (2/4)

- The API shall be easy to use by humans
- This means:
  - helpful error messages
  - no undocumented areas
  - every behavior of the API is completely explained
  - no guesswork is necessary, ever
Our vision for the REST-API (3/4)

- Automation with the API shall be easy
  - All API URLs (endpoints) are completely documented
  - The documentation is always up to date
  - Example code is provided for each URL
  - It will always be backwards compatible

- Because of this, we automatically generate the documentation and the specification from the source code
Our vision for the REST-API (4/4)

- The API conforms to industry standards
- Because it is based on WWW technology, this means:
  - It’s based on HTTP/1.1
  - We use JSON as a transport format
  - We formalize it with an OpenAPI 3.0.x specification file
  - We target Level 3 of the Richardson Maturity Model
Our vision for the REST-API

✓ The API covers the entire functionality of the GUI and the command line
✓ The API shall be easy to use by humans
✓ Automation with the API shall be easy
✓ The API conforms to industry standards
Generated documentation
REST-API - current status

- Major progress:
  - Hosts, folders, host-groups, service-groups, contact-groups (configuration)
  - Baking, signing, downloading of agents

- Development focus for 1.7:
  - Bakery, BI, Folders, Hosts, Services, Groups, Configuration, Rulesets
  - Get Livestatus data via the API for Services and Hosts
Demo: A few important terms

- **API endpoint:** The URL with which you can make the Checkmk API do something

- **HTTP method:** Something like a category of the endpoint’s behavior, e.g. if they may change data, or are read-only

- **HTTP status code:** Numbers like 2XX (OK), 3XX (see other resource), 4XX (client error), 5XX (server error)

- **API payload:** JSON structure to be sent to the API endpoint
Demo time!

- Our example:
  - Synchronize your IT inventory DB (or Excel file) with Checkmk to immediately start monitoring once a new piece of infrastructure is deployed.
Timeline for the REST API

**Today**
- Development progressing nicely
- Complete API documentation
- Testing, testing, testing

**Checkmk 1.7**
- ✔ Feature equivalence with old Web API
- ✔ Most valuable use-cases implemented
- ✔ Complete API documentation

**Beyond 1.7**
- ✔ More use-cases covered
- ✔ Maintaining strict backwards compatibility
Thank you