

Welcome to the

**XMLPrague 2015
BaseX Users Meetup!**

The Agenda

Session I

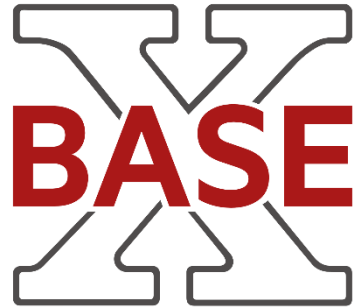
- 14:30** **Christian Grün** • BaseX 8.0 – 7.8:
The Latest 0.2 Changes
- 15:00** **Andy Bunce** • XML Benchmarking across
Different Environments
- 15:30** **Mansi Sheth** • Building Security Analytics
Solution Using Native XML Database
- 16:00** Coffee and questions



The Agenda

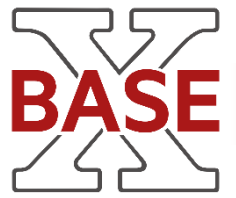
Session II

- 16:30** **Maximilian Gärber** • A Conference Application System Built with BaseX
- 17:00** **Marco Lettere** • HealthSOAF: BaseX and Its Usage in the Healthcare Domain
- 17:30** **Hans-Jürgen Rennau** • TopicTools – A Framework for the Development of XQuery Command Line Tools



BaseX 8.0 – 7.8

The latest 0.2 changes



Storage

Document Index

- indexing of **document paths**
- much **faster access** to single documents

Updates

- replace documents **in-place** whenever possible
- updatable index structures: save **disk space**
- `AUTOOPTIMIZE`: optimize after each update

Web Applications

DBA: Database Administration

- application for **management** of server instances
- maps existing **database features** to the browser
- showcase for **RESTXQ** development
- optimized for **stability**
...but you'll break it; report back to us!
- **basic** interface (no glamour, limited comfort)
...looking forward to your contributions!

Web Applications

RESTXQ

- **regex support** in %rest:path:
 - example: "app/{\$id=[0-9]+}/order/{\$sub=.*}"
 - may extend over multiple segments
- content negotiation: evaluation of **quality factors**
- new annotation %rest:method
- support for **error wildcards** (%rest:error)

Security

User Management

- switched to **XML** representation

Authentication

- plain MD5 was **dropped** (prone to rainbow attacks)
- **replaced** with Salted SHA-256
- additionally: **digest** authentication (HTTP, client bindings)
- new **language bindings** (backward-compatible)

XQuery

Support for (most of) XQuery 3.1

- **maps** (now: officially supported :)
- **arrays** (no flattening when you don't want it)
- **lookup** operator (?): navigation in maps and arrays
- **arrow** operator (=>)
- **adaptive** serialization
- better **JSON** support
- new **functions**, better **collation** features

XQuery

Updates

- `MIXUPDATES`: mixing updates and result output

Query Optimizations

- simplification of **nested predicates**
- **index rewriting** across multiple FLWOR clauses
- smarter **function inlining**, better control
- better **iterative processing**

XQuery

New/Updated Functions

- `admin:write-log`
- `db:alter`, `db:copy`, `db:create-backup`, ...
- `fetch:xml`
- `file:children`, `file:base-dir`, `file:current-dir`
- `ft:contains`, `ft:normalize`
- `http:send-request`
- `user:list`, `user:create`, `user:grant`, ...
- `xquery:parse`, `xquery:update`

XQuery

XQUnit

Updated, based on our first experiences:

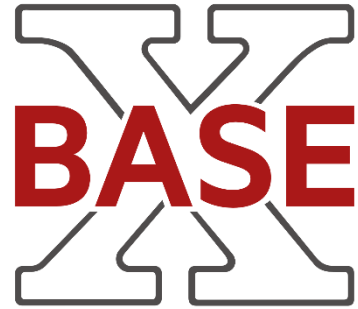
- tests are now run **outside XQuery**
- enables testing of **update statements**
- new **command**: TEST
- **command-line** flag: -t
- basic **GUI** support



GUI

Text Editor

- **sorting**, removal of duplicates (blazing fast ;)
- better integration of **search features**
- more **code completions**



Have fun!