

# Tutorial Proposal for the 13<sup>th</sup> International Conference on Advances in Databases, Knowledge, and Applications – DBKDA, Valencia/Spain, May 30 – June 3, 2021

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Title: “Bashing” the Killer from the Command Line

## Organizers:

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## Tutorial description:

If times are tough, they should at least be fun. That's exactly the approach of this tutorial, which is about identifying a dangerous criminal from a huge number of police files in order to catch him. The tools needed? A computer with a bash shell [1,2] or alternatively putty [3] to log in remotely into a shell and dig through the files. You will receive assistance from the COREUTIL [4] Department, which provides a variety of specialists to solve the case. Led by the captains *Awk* and *Sed*, two veteran allrounders, the sergeants *Grep*, *Cut*, *Sort*, *Merge*, *Join*, etc. are at your disposal. A significant number of colleagues even have REGEXP specialized training.

At the beginning of the tutorial they will tell you about a case they have already solved and how they solved it in teamwork. This will help you to get to know the team better and to find out what special knowledge the individual colleagues have.

Then it is time to solve a current, unsolved case. The colleagues from the COREUTILS department, under your guidance, will be happy to help you solve the case ...

## Target Audience:

Level: Beginner/Intermediate - Participants should know what a command shell is.

## Materials to be distributed to the attendees:

- Slideset
- Profile with the special skills of the individual members of the COREUTILS team ([Refcard](#))
- Electronic police files (as zipped directory)

## Duration: (1,5 hours)

## Learning objectives:

After completing the tutorial, the participants have an overview of the most important shell commands and their functionality.

The participants will be able to successfully create their own filter pipes for various tasks.

They have internalized the idea of assembling more complex tasks from small, well-defined components, allowing rapid prototyping, incremental iterations and easy experimentation.

## Original Idea:

The Command Line Murders from Noah Veltman [2]

## Short Bio:

**Prof. Dr. Andreas Schmidt** is a professor at the Department of Computer Science and Business Information Systems of the Karlsruhe University of Applied Sciences (Germany). He is lecturing in the fields of database information systems, data analytics and model-driven software development. Additionally, he is a senior research fellow in computer science at the Institute for Applied Computer Science of the Karlsruhe Institute of Technology (KIT). His research focuses on database technology, knowledge extraction from unstructured data/text, Big Data, and generative programming. Andreas Schmidt was awarded his diploma in computer science by the University of Karlsruhe in 1995 and his PhD in mechanical engineering in 2000. Dr. Schmidt has numerous publications in the field of database technology and information extraction. He regularly gives tutorials on international conferences in the field of Big Data related topics and model driven software development. Prof. Schmidt followed sabbatical invitations from renowned institutions like the Systems-Group at ETH-Zurich in Switzerland, the Database Group at the Max-Planck-Institute for Informatics in Saarbrücken/Germany and the Data-Management-Lab at the University of Darmstadt.

**Prof. Dr. Fritz Laux ...**

## Software Requirements for the hands-on parts:

- Unix and Mac users: none, the needed tools are already part of your distribution
- Windows users: Please install cygwin [2] or the Windows Subsystem for Linux [3] on your computer.

## References:

[1] Cygwin Home page. <https://www.cygwin.com>, last accessed: 1.3.2021

[2] Windows Subsystem for Linux. <https://docs.microsoft.com/en-us/windows/wsl/>, last accessed: 1.3.2021

- [3] Putty Homepage. <https://www.putty.org/>, last accessed: 1.3.2021
- [4] GNU Core Utilities. [https://en.wikipedia.org/wiki/GNU\\_Core\\_Uilities](https://en.wikipedia.org/wiki/GNU_Core_Uilities), last accessed: 1. 3. 2021
- [5] Noah Veltman, The Command Line Murders, <https://github.com/veltman/clmystery#the-command-line-murders>