



Concurrent Presentation Session
SELF-DIRECTED AND SELF-REGULATED LEARNING

Measuring Success in Self-Guided Information Assurance Training

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Agenda

- **Introduction**
- **Problem Background**
- **Capturing High-Fidelity Data**
- **Tracking Interactive Training**
- **Future Use Cases**
- **Questions**

Who Are We?



**Carnegie
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Software
Engineering
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Federally Funded Research and Development Center (FFRDC)

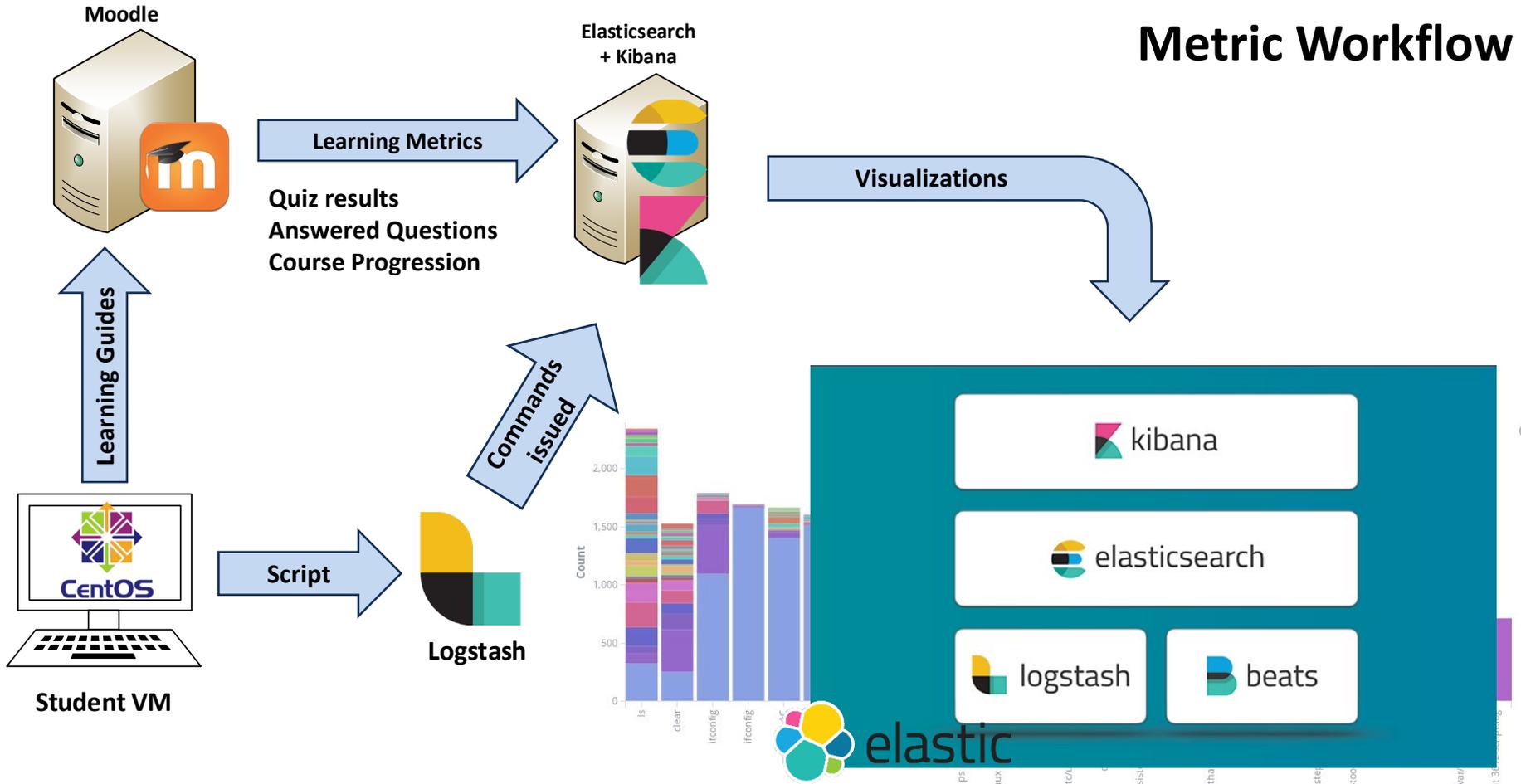
Problem Background

- High demand for “cyber operators”
- Extremely rigorous, lengthy training
- High standards
- High attrition rates
- High cost
- Basics matter!

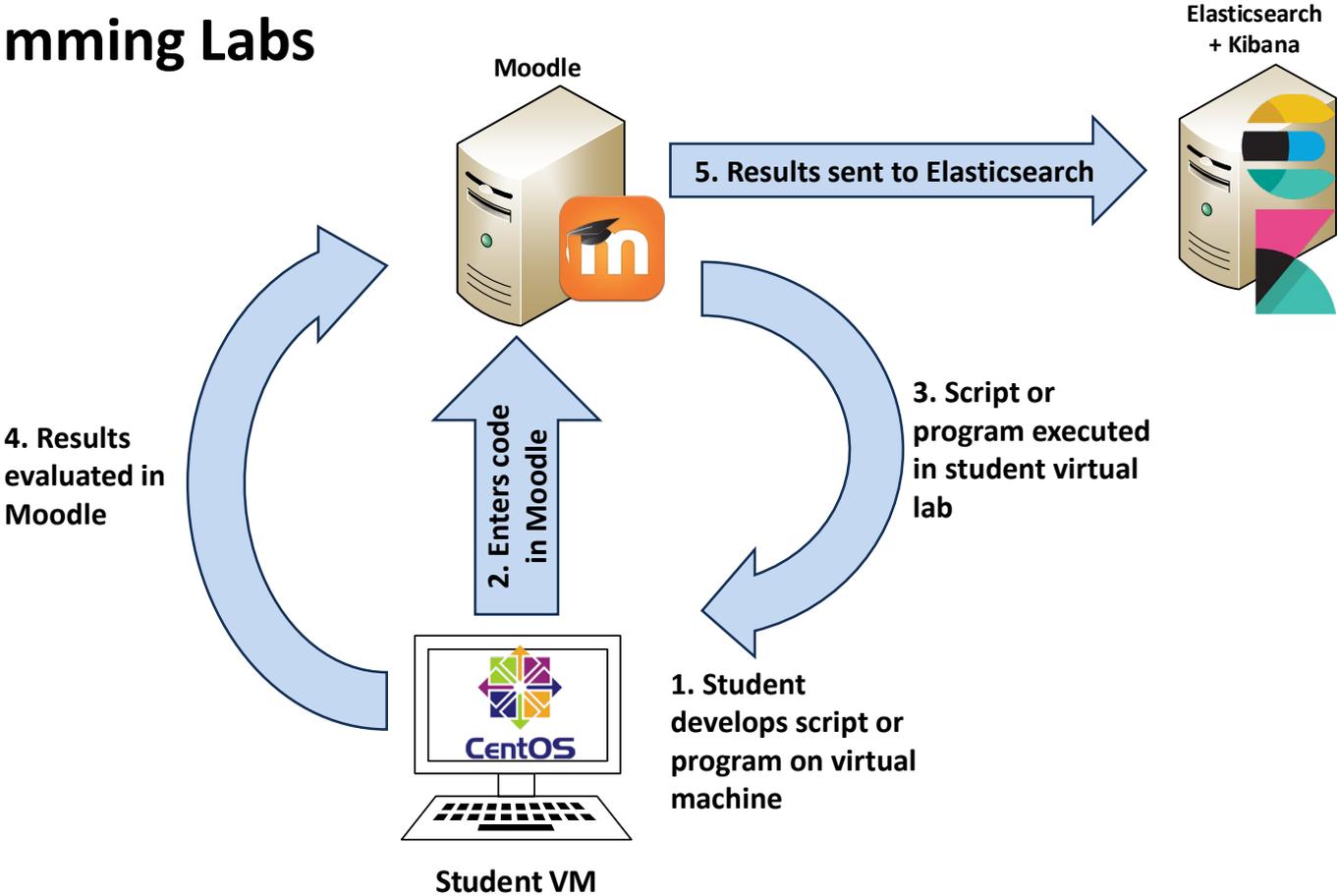
A Need for Data

- Military flight trainings tracks loads of data about students
 - Easier to evaluate student performance
 - Ability to identify what works and what doesn't
 - Match training results to future performance
-
- Capturing course progression with xAPI
 - Quiz results
 - Length to complete labs
 - Command input

Metric Workflow



Virtual Programming Labs



Future Work



- Interactive videos
 - In-video quizzing
 - xAPI statements
- Automatic grading and course progression
- Measure progress of past students
- Analyze captured data

Try It Out

- <https://cyberforce.site>
- CAC-enabled
- Search “MCCORC”

Thank you!