Distributed Data Management

Winter

(in German: Distributed Data Management)

Module-ID: FIN-INF-102404

Abbreviation	Credit Points	Semester	Term	Duration	Language	Level
DDM	6	Winter	starting at 1.	1 Semester	english	Master

Link:	LSF
Limited accessability:	
Responsibility:	Gunter Saake
Lecturer:	Eike Schallehn
Classes:	• Lecture *Distributed Data Management* • Exercise *Distributed Data Management*
Applicability in curriculum:	- M.Sc. INF: Informatik - M.Sc. INGINF: Informatik - M.Sc. WIF: Informatik - M.Sc. DKE: Data Processing for Data Science - M.Sc. DE: Fachliche Spezialisierung - M.Sc. VC: Computer Science

Intended learning outcomes:
The students ...

- know basic principles and advantages of distributed data management
- can implement distributed databases

- understand query and transaction processing in distributed and parallel database systems
- optimize the run-time performance and satisfy requirements regarding reliability and availability of distributed systems

Content:

- Overview and classification of distributed data management (distributed DBMS, parallel DBMS, fedrated DBMS, P2P)
- Distributed DBMS: architecture, distribution design, distributed query processing and optimization, distributed transactions, and transactional replication
- Parallel DBMS: fundamentals of parallel processing, types of parallelization in DBMS, parallel query processing

Workload:
56 h contact hours + 124 h self-study

Pre-examination requirements:	Type of examination:	Teaching method / lecture hours per week (SWS):
To be eligible to take the exam, you must have completed certain prerequisites. Further details will be announced in the first lecture.	Written exam (120 min)	• Vorlesung 2 SWS • Übung 2 SWS

Prerequisites according to examination regulations:	Recommended prerequisites:
none	Database introduction course

Media:	Literature:

Comments:

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