Abstract: Cloud Computing is one of the most notorious hypes in today's information systems research and practice. In this talk, I will introduce the basic notions of Cloud Computing, and provide an in-depth look under the hood of CloudScale, an experimental Java-based middleware for building applications in an Infrastructure-as-a-Service cloud. I will explain how to build applications based on CloudScale and how to deploy such applications. Furthermore, I will specifically discuss the importance of runtime monitoring for elastically scaling cloud applications, and explain the powerful monitoring facilities that CloudScale provides via the complex event processing paradigm. I will conclude the talk with an outlook on current research issues in building cloud applications, both with and without the CloudScale middleware.

About the speaker: Dr. Philipp Leitner ([http://www.infosys.tuwien.ac.at/staff/leitner/](http://www.infosys.tuwien.ac.at/staff/leitner/)) is a postdoctoral fellow at Vienna University of Technology, where he teaches and researches service-oriented, event-driven and cloud-based applications for the Internet of Services. Before, Philipp was with Siemens PSE in Vienna and worked as independent software engineer. Philipp has co-authored upwards of 50 peer-reviewed publications, including multiple papers in IEEE Transactions on Services Computing, IEEE Internet Computing, and the ACM International Conference on Distributed Event-Based Systems (DEBS). Currently, Philipp is mostly interested in how to support engineers with building, deploying, migrating and monitoring applications deployed to public cloud services. Reach Philipp either per mail (leitner AT infosys.tuwien.ac.at) or via Twitter (@xLeitix).