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Titolo	Engineering Scalable, Elastic, and Cost-Efficient Cloud Computing Applications : The CloudScale Method // edited by Steffen Becker, Gunnar Brataas, Sebastian Lehrig
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ISBN	3-319-54286-9
Edizione	[1st ed. 2017.]
Descrizione fisica	1 online resource (XIX, 190 p. 54 illus., 31 illus. in color.)
Disciplina	004.6
Soggetti	Computer communication systems Software engineering Computer system failures Computer Communication Networks Software Engineering System Performance and Evaluation
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Introduction -- CloudScale Method Quick View -- Cloud Computing Applications -- ScaleDL -- The CloudScale Method -- Analyzing a Modeled System -- Analyzing and Migrating an Implemented System -- The CloudScale Method for Managers -- Case Studies.
Sommario/riassunto	This book provides an overview of the problems involved in engineering scalable, elastic, and cost-efficient cloud computing services and describes the CloudScale method — a description of rescuing tools and the required steps to exploit these tools. It allows readers to analyze the scalability problem in detail and identify scalability anti-patterns and bottlenecks within an application. With the CloudScale method, software architects can analyze both existing and planned IT services. The method allows readers to answer questions like: • With an increasing number of users, can my service still deliver acceptable quality of service? • What if each user uses the service more intensively? Can my service still handle it with acceptable quality of service? • What if the number of users suddenly increases? Will my

service still be able to handle it? • Will my service be cost-efficient?

First the book addresses the importance of scalability, elasticity, and cost-efficiency as vital quality-related attributes of modern cloud computing applications. Following a brief overview of CloudScale, cloud computing applications are then introduced in detail and the aspects that need to be captured in models of such applications are discussed. In CloudScale, these aspects are captured in instances of the ScaleDL modeling language. Subsequently, the book describes the forward engineering part of CloudScale, which is applicable when developing a new service. It also outlines the reverse and reengineering parts of CloudScale, which come into play when an existing (legacy) service is modified. Lastly, the book directly focuses on the needs of both business-oriented and technical managers by providing guidance on all steps of implementing CloudScale as well as making decisions during that implementation. The demonstrators and reference projects described serve as a valuable starting point for learning from experience. This book is meant for all stakeholders interested in delivering scalable, elastic, and cost-efficient cloud computing applications: managers, product owners, software architects and developers alike. With this book, they can both see the overall picture as well as dive into issues of particular interest.

Features and Benefits

- Provides an overview of the CloudScale method to enable scalable, elastic and cost-efficient cloud computing applications
- A valuable guide to both the development of new software via forward engineering and the modification of existing services using reverse engineering
- Includes descriptions of two case studies to allow managers and software professionals to learn from both theory and real-world experience .
