Record Nr. UNINA9910818949203321 Autore **Bouillard Anne** Titolo Deterministic network calculus: from theory to practical implementation / / Anne Bouillard, Marc Boyer, Euriell Le Corronc Pubbl/distr/stampa London, UK:,: ISTE Hoboken, NJ:,: Wiley,, 2018 **ISBN** 1-119-56341-0 1-119-56340-2 1-119-44028-9 Edizione [1st edition] Descrizione fisica 1 online resource (330 pages) Network and telecommunications series Collana Disciplina 519.82 Soggetti Queuing theory Computer networks - Mathematical models Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Sommario/riassunto Deterministic network calculus is a theory based on the (min,plus) algebra. Its aim is to compute worst-case performance bounds in communication networks. Our goal is to provide a comprehensive view of this theory and its recent advances, from its theoretical foundations to its implementations. The book is divided into three parts. The first part focuses on the (min,plus) framework and its algorithmic aspects. The second part defines the network calculus model and analyzes one server in isolation. Different service and scheduling policies are discussed, particularly when data is packetized. The third part is about network analyses. Pay burst only once and pay multiplexing only once phenomena are exhibited, and different analyses are proposed and compared. This includes the linear programming approaches that

stability are detailed.

compute tight performance bounds. Finally, some partial results on the