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| 1. Record Nr. | UNINA9910141493503321 |
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| Titolo | Advanced transport protocols [[electronic resource]] : designing the next generation // Ernesto Exposito |
| Pubbl/distr/stampa | Hoboken, N.J., : ISTE Ltd/John Wiley and Sons Inc, 2013 |
| ISBN | 1-118-58020-6 1-299-13988-4 1-118-58017-6 1-118-57832-5 |
| Descrizione fisica | 1 online resource (295 p.) |
| Collana | Networks and telecommunications series |
| Disciplina | 004.62 621.38212 |
| Soggetti | Computer network protocols |
| Lingua di pubblicazione | Inglese |
| Formato | Materiale a stampa |
| Livello bibliografico | Monografia |
| Note generali | Description based upon print version of record. |
| Nota di bibliografia | Includes bibliographical references and index. |
| Nota di contenuto | Title Page; Contents; Preface; Chapter 1. Introduction; 1.1. Evolution of application and network layers; 1.2. Summary of contributions; 1.3. Book structure; Chapter 2. Transport Protocols State of the Art; 2.1. Introduction; 2.2. Transport layer reference models; 2.2.1. OSI model; 2.2.2. TCP/IP model; 2.2.3. Transport layer; 2.2.4. Transport services; 2.3. Transport functions and mechanisms; 2.3.1. Error control; 2.3.2. Congestion control; 2.3.3. Summary; 2.4. IETF transport protocols; 2.4.1. TCP; 2.4.2. UDP; 2.4.3. SCTP; 2.4.4. DCCP; 2.4.5. MPTCP; 2.5. Summary Chapter 3. Semantic Modeling of Transport Protocols and Services3.1. Introduction; 3.2. Model and semantic-driven architecture; 3.2.1. Model-driven architecture; 3.2.2. Ontology-driven architecture; 3.3. Design of a QoS ontology framework; 3.3.1. Quality of Service definition; 3.3.2. ITU-T X.641 framework; 3.3.3. Service; 3.3.4. Service user; 3.3.5. Service provider; 3.3.6. QoS characteristic; 3.3.7. QoS requirement; 3.3.8. QoS parameter; 3.3.9. QoS function; 3.3.10. QoS mechanism; 3.4. Design of a QoS transport ontology for the next generation transport layer; 3.4.1. Ontology representation 3.4.2. X.641 QoS ontology3.4.3. QoS transport requirements; 3.4.4. |

QoS transport mechanisms, functions and protocols; 3.5. QoS transport ontology specification; 3.5.1. TCP semantic description; 3.5.2. UDP semantic description; 3.5.3. SCTP semantic description; 3.5.4. DCCP semantic description; 3.5.5. MPTCP semantic description; 3.6. Usage of the QoS transport ontology specification; 3.6.1. QoS transport services characterization; 3.6.2. Transport components and transport composite characterization; 3.7. Summary; Chapter 4. Model-Driven Design

Methodology of TransportMechanisms and Functions

4.1. Introduction4.2. Software engineering process; 4.2.1. Unified Modeling Language; 4.2.2. UML 2.4.1-based methodology; 4.2.3. UML diagrams; 4.2.4. Summary and additional resources; 4.3. Applying the UML-based software engineering methodology for transport services; 4.3.1. Contextual model of transport functions and mechanisms; 4.3.2. Analysis of requirements guiding transport functions; 4.3.4. Design of transport functions and mechanisms; 4.4. Summary; Chapter 5. Model-Driven Specification and Validationof Error Control Transport

Mechanisms and Functions; 5.1. Introduction

5.2. Design of an error control function5.2.1. Behavior specification of the sending side protocol entity; 5.2.2. Behavior specification of the receiving side protocol entity; 5.3. Functional validation of the error control function; 5.3.1. Functional validation using a perfect medium; 5.3.2. Functional validation using an imperfect medium; 5.4. A new design of the error control function; 5.4.1. Functional validation using an imperfect medium; 5.4.2. More open questions; 5.5. A model-driven simulation environment; 5.5.1. Model-driven simulation framework 5.5.2. Model-driven network simulator package

Sommario/riassunto

The current diversity of transport services, as well as the complexity resulting from the deployment of specific transport protocols or mechanisms over the different services provided by heterogeneous networks, demand a novel design of the transport layer. Moreover, current and future applications will only be able to take advantage of the most adapted and available transport services if they are able to interact (i.e. discover, compose, deploy and adapt) efficiently with this advanced transport layer. The work presented in this book proposes a model-driven methodology and a service-or
