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3.5.1 Ontology-based Grid resource matching3.5.2 Semantic workflow registration and discovery in myGrid; 3.5.3 Semantic workflow enactment in Geodise; 3.5.4 Semantic service annotation and adaptation in ICENI; 3.5.5 PortalLab - A Semantic Grid portal toolkit; 3.5.6 Data provenance on the Grid; 3.5.7 A summary on the Semantic Grid; 3.6 Autonomic Computing; 3.6.1 What is autonomic computing?; 3.6.2 Features of autonomic computing systems; 3.6.3 Autonomic computing projects; 3.6.4 A vision of autonomic Grid services; 3.7 Chapter Summary; 3.8 Further Reading and Testing; 3.9 Key Points
3.10 ReferencesPart Two Basic Services; 4 Grid Security; 4.1 Introduction; 4.2 A Brief Security Primer; 4.3 Cryptography; 4.3.1 Introduction; 4.3.2 Symmetric cryptosystems; 4.3.3 Asymmetric cryptosystems; 4.3.4 Digital signatures; 4.3.5 Public-key certificate; 4.3.6 Certification Authority (CA); 4.3.7 Firewalls; 4.4 Grid Security; 4.4.1 The Grid Security Infrastructure (GSI); 4.4.2 Authorization modes in GSI; 4.5 Putting it all Together; 4.5.1 Getting an e-Science certificate; 4.5.2 Managing credentials in Globus; 4.5.3 Generate a client proxy; 4.5.4 Firewall traversal
4.6 Possible Vulnerabilities

Sommario/riassunto

Find out which technologies enable the Grid and how to employ them successfully! This invaluable text provides a complete, clear, systematic, and practical understanding of the technologies that enable the Grid. The authors outline all the components necessary to create a Grid infrastructure that enables support for a range of wide-area distributed applications. The Grid: Core Technologies takes a pragmatic approach with numerous practical examples of software in context. It describes the middleware components of the Grid step-by-step, and gives hands-on advice on designing and