

Contents

Chapter 1 Introduction	1
Chapter 2 Related Works	4
2.1 J2ME	4
2.1.1 CLDC and KVM	5
2.1.1.1 MIDP	6
2.1.2 CDC and CVM	7
2.1.2.1 Foundation Profile	8
2.1.2.2 RMI Optional Profile	9
2.2 JiniME	12
2.2.1 JiniME Architecture	12
2.2.1.1 JiniME-Capable Mobile Devices	13
2.2.1.2 Jini Bridge	14
2.2.1.3 Sessile-Client-to-Mobile-Service Bridge	15
2.2.1.4 Mobile-Client-to-Sessile-Service Bridge	17
2.3 Security	19
2.3.1 Jini Security	19
2.3.2 Kerberos Authentication Protocol	20
Chapter 3 Architecture	23
3.1 JiniME Methodology	23
3.2 Secure JiniME Methodology	23
3.2.1 Why modify JiniME Methodology	24
3.2.2 Secure JiniME Architecture	25
3.2.2.1 Secure JiniME-Capable Mobile Devices	25
3.2.2.2 Jini Bridge	26
3.2.2.3 Sessile-Client-to-Mobile-Service Bridge	27
3.2.2.4 Mobile-Client-to-Sessile-Service Bridge	30
Chapter 4 Implementation	32
4.1 Client Code Snip	32
4.2 Server Code Snip	34
4.3 HTTPMD Code Snip	36
4.4 Jini Bridge Code Snip	37
4.5 Properties Setting	39
4.5.1 Kerberos Requirements	39
4.5.2 Setting Security Properties	41
4.5.3 Login Configuration File	41

4.5.4 Policy Files.....	44
4.6 Running the Program	47
Chapter 5 Conclusion and Future Works	51
Appendixe A: Building CVM	52
Appendixe B: Kerberos Setup Instructions	56
Appendixe C: Jini JAR Files	57

