

Adding User Authentication to Your Application
Storing Image and Video Files in Cloud Storage
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Introduction

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- 2 Security Requirements For an Application.
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Why is security more of a concern ?

- ▶ No inherent physical protection
- ▶ Physical connections between devices are replaced by logical associations
- ▶ Don't need physical access to the network infrastructure (cables, hubs, routers, etc.) for **xmitting** messages

- ▶ Security vulnerabilities :
 - ▶ easier to impersonate (= to cheat on identities)
 - ▶ illegitimate access to the network and its services is easy
 - ▶ denial of service (DoS) is easily.

Security requirements for Applications

- ▶ classic CIA security requirements
 - ▶ CIA = confidentiality + integrity + availability
- ▶ authentication
 - ▶ origin of received messages must be verified
- ▶ access control
 - ▶ limit access to network services to legitimate entities only
 - ▶ need permanent access control
 - ▶ checking the legitimacy of an entity only when it joins the network (and its logical associations are established) is not sufficient
 - ▶ bec. logical associations can be hijacked
- ▶ confidentiality
 - ▶ messages must be encrypted

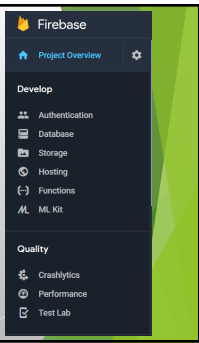
Security requirements for Application (2)

- ▶ integrity
 - ▶ malicious modification of messages is possible
 - ▶ Even if modifying on-the-fly (during radio transmission) is not so easy
 - ▶ integrity of received messages must be verified
- ▶ privacy
 - ▶ incl. location privacy
 - ▶ do not reveal the location of the user, nor the party with which she communicates
 - ▶ law enforcement agencies must have access to these two pieces of info

Adding User Authentication To a Application

What Is Firebase?

Firestore is a comprehensive framework that allows you to create web and mobile applications. You don't need to manage servers. You don't need to write APIs. Firestore is your server, your API and your datastore, all written so generically that you can modify it to suit most needs.



Lets Get Started With QwikLab

References:

- J. Edney, W. Arbaugh. *Real 802.11 Security: WiFi Protected Access and 802.11i*. Addison-Wesley, 2004.
- Security and Co-operation by Leszek T. Lilien
- <https://howtofirebase.com/what-is-firebase-fcb8614ba442>
