



Hibrit Cüzdanlar

Mustafa Sakalsız - T2 Yazılım
Dr. Kamer Kaya - Sabancı Üniversitesi

Blockchain - Projeler



BBN Projesi

Dijital Kimlik
Kripto Para (Keklik)
Pazar Yeri
Mobil Light Wallet



B*** Projesi

Zero Knowledge Proof
Cüzdan

Blockchain - Hackathon



BNP PARIBAS

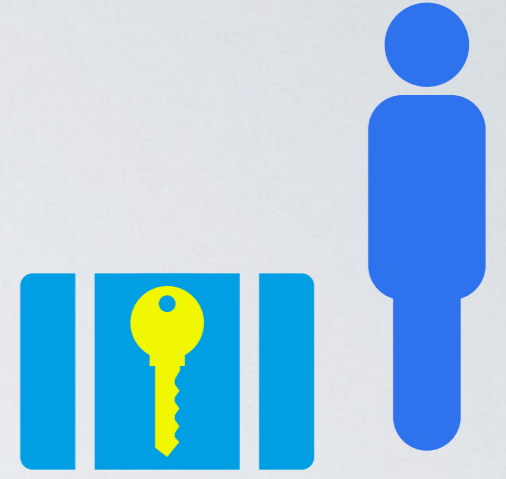
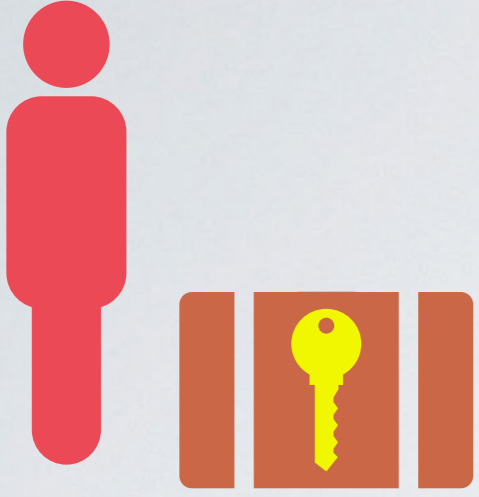
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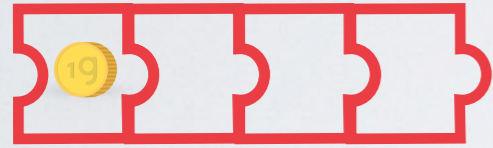
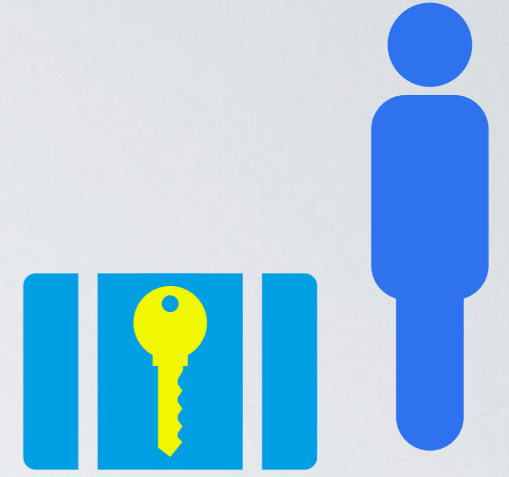
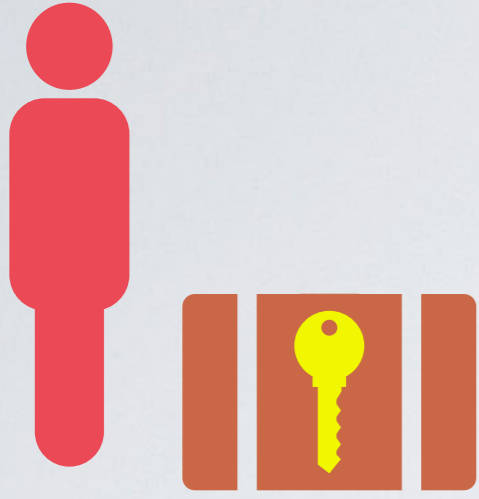
Bondchain
Dijital Çek-Senet
3.lük Derecesi
Jüri Özel Ödülü

Goldchain
Uluslararası Dijital Altın Hesabı
4.lük Derecesi

Genel Bir Cüzdan Yapısı



Genel Bir Cüzdan Yapısı

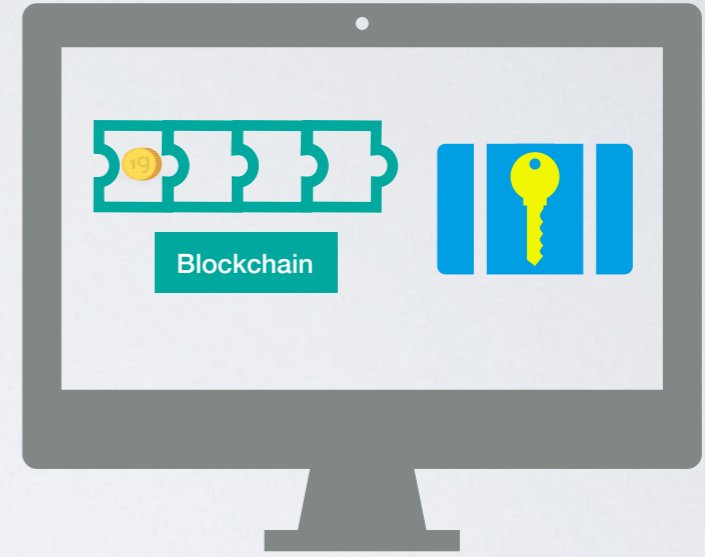
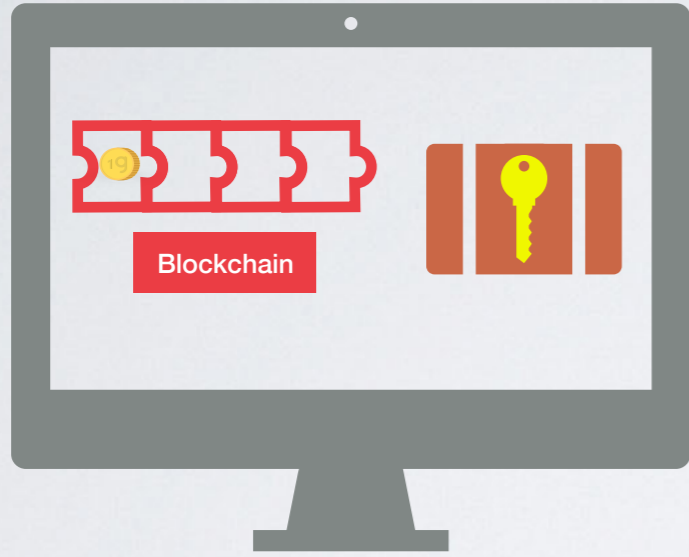


Blockchain

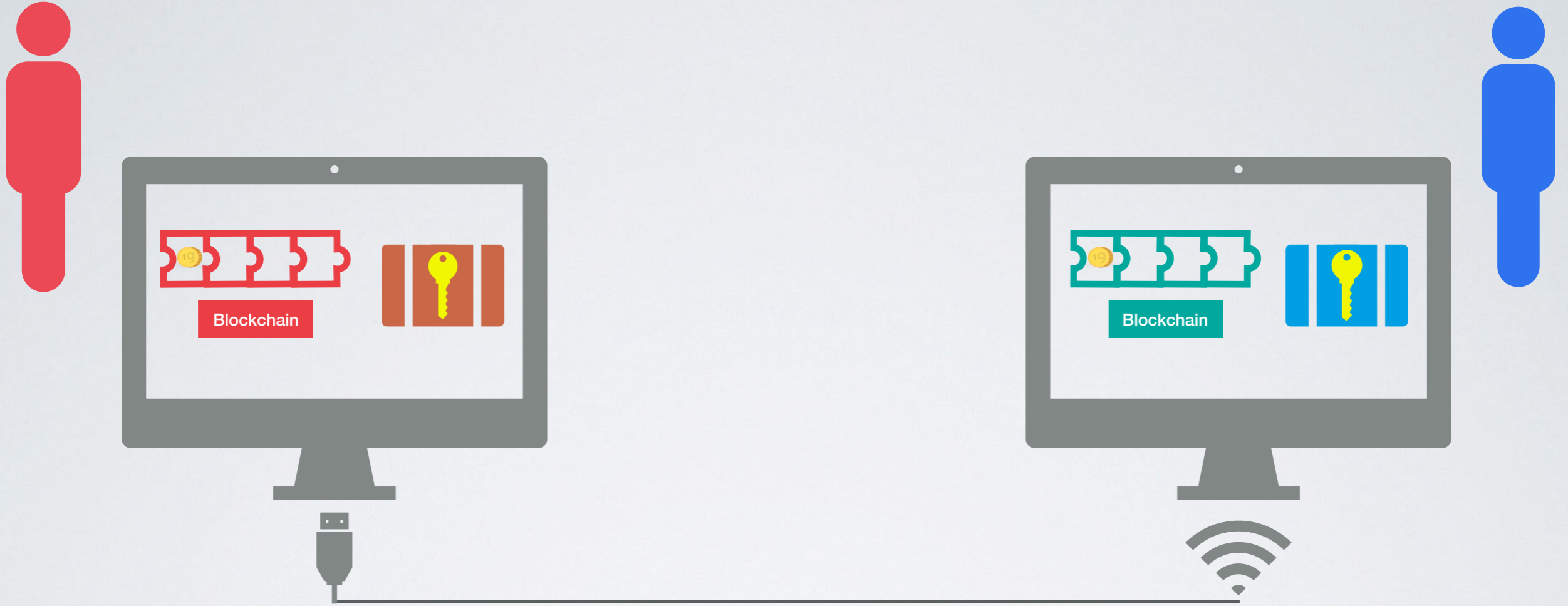


Blockchain

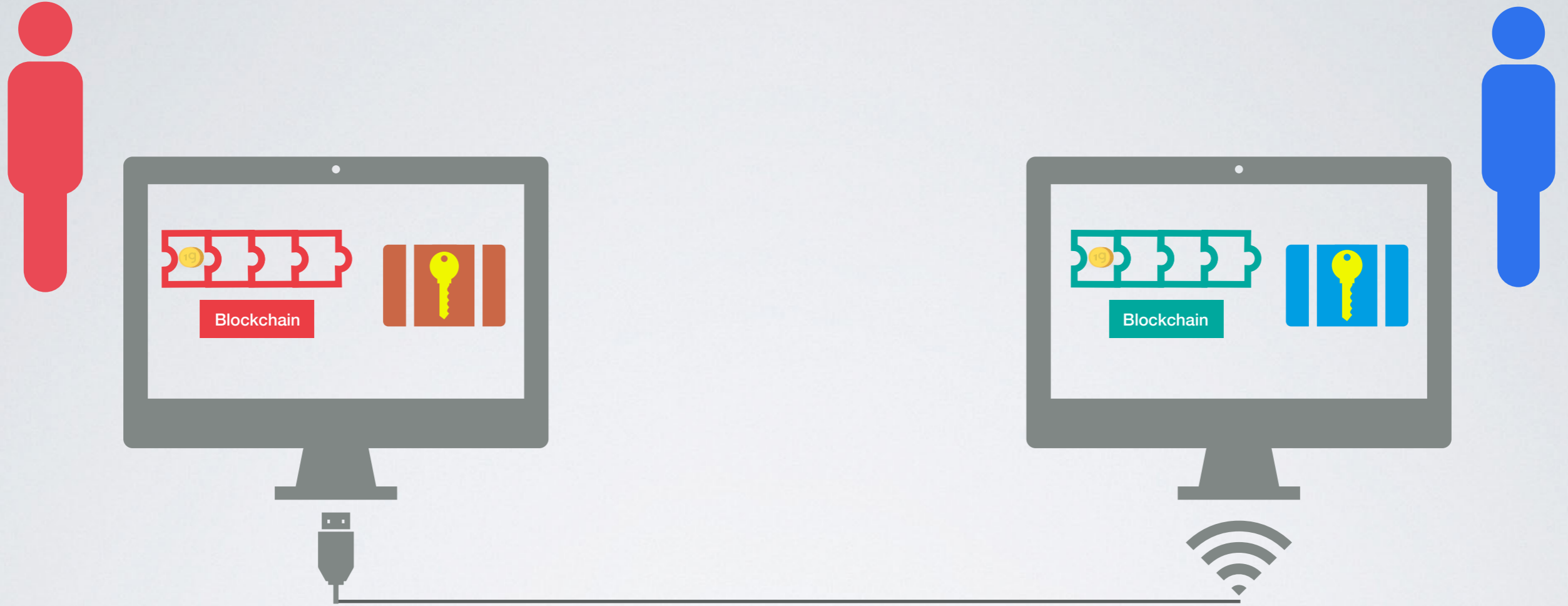
Genel Bir Cüzdan Yapısı



Cüzdanın Çalışması



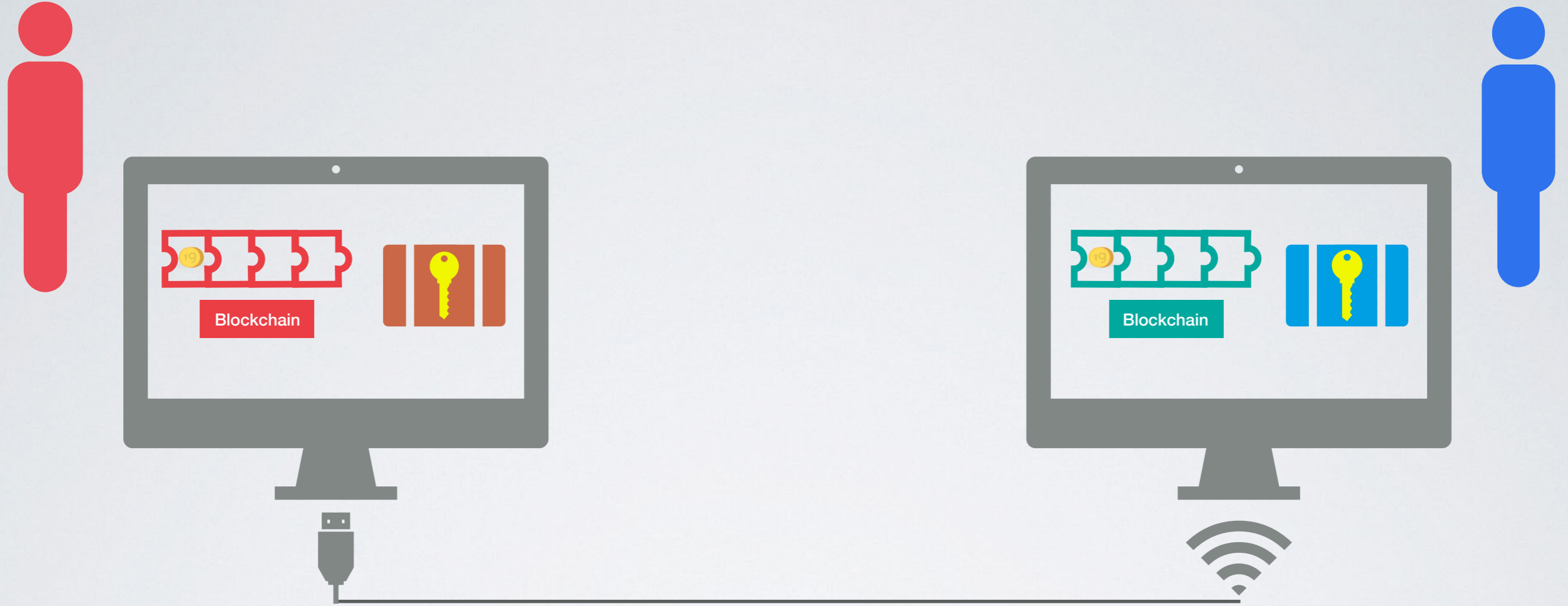
Cüzdanın Çalışması



İşlemi Oluşturma



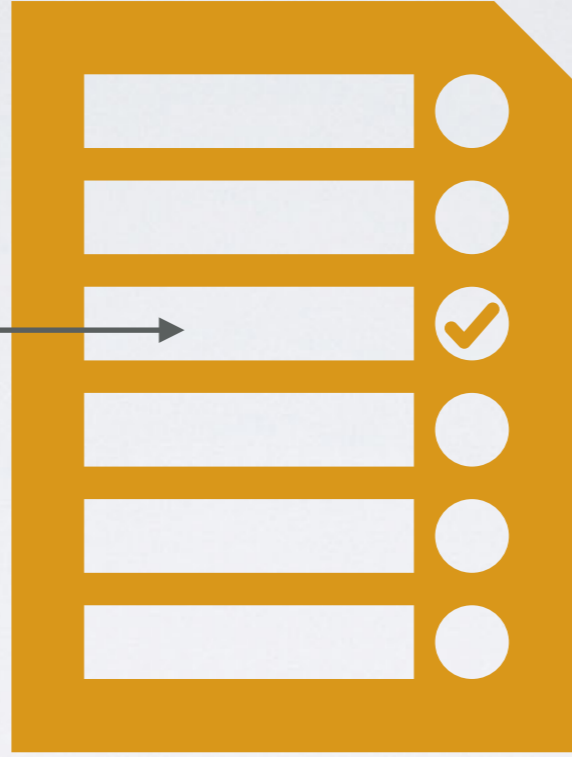
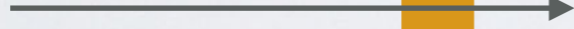
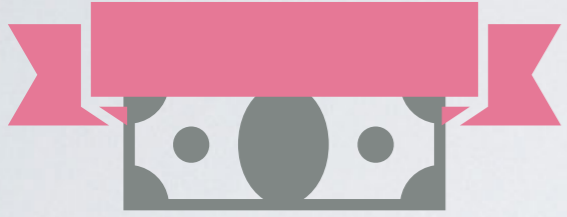
Cüzdanın Çalışması



İmzalama

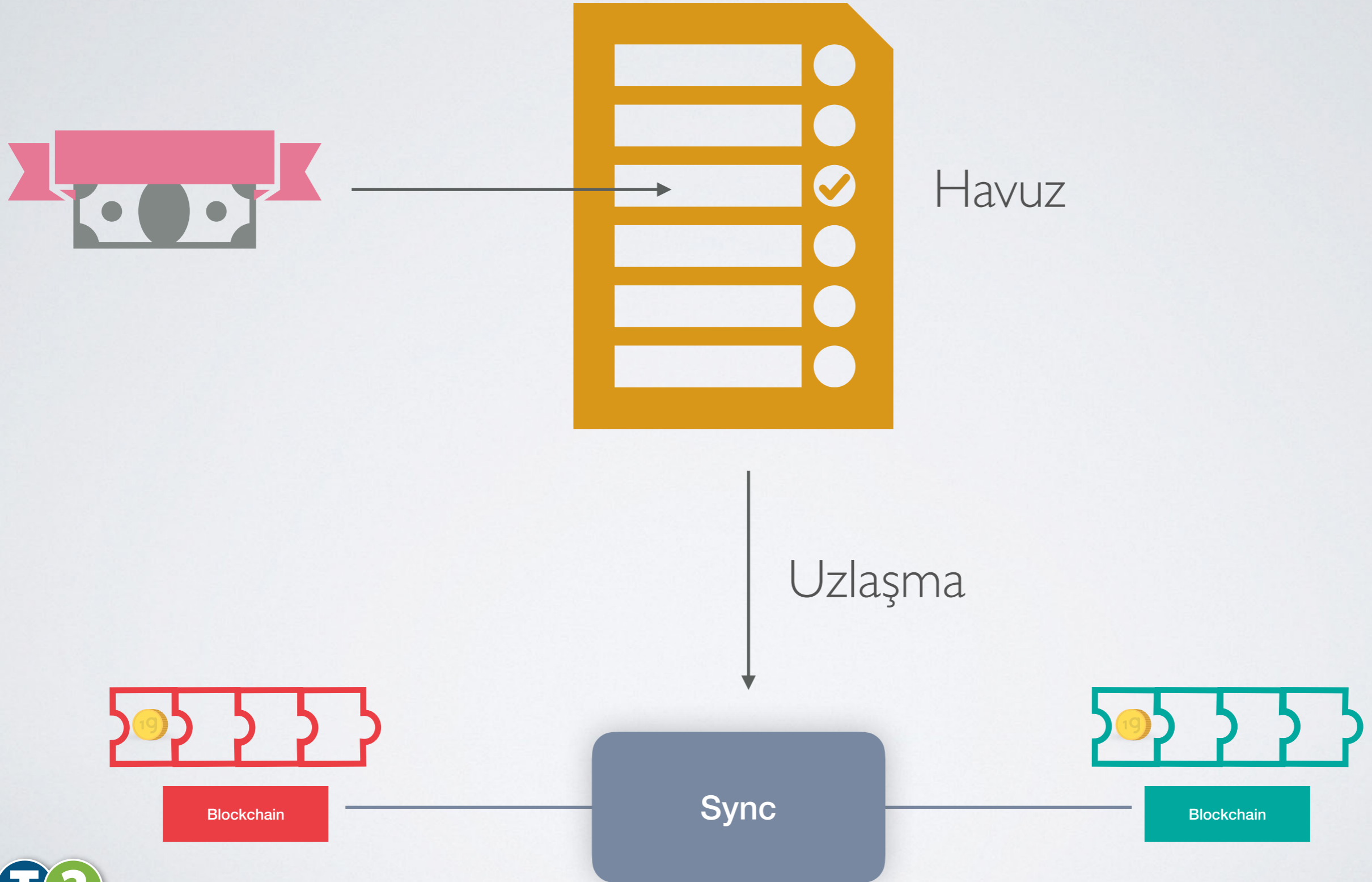


Cüzdanın Çalışması

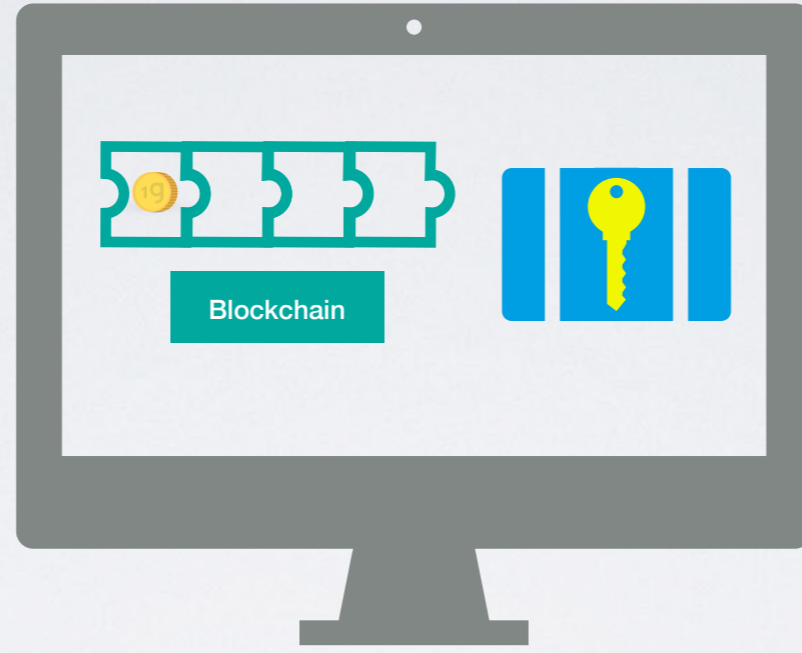


Havuz

Genel Bir Cüzdan Yapısı



Genel Bir Cüzdan Yapısı

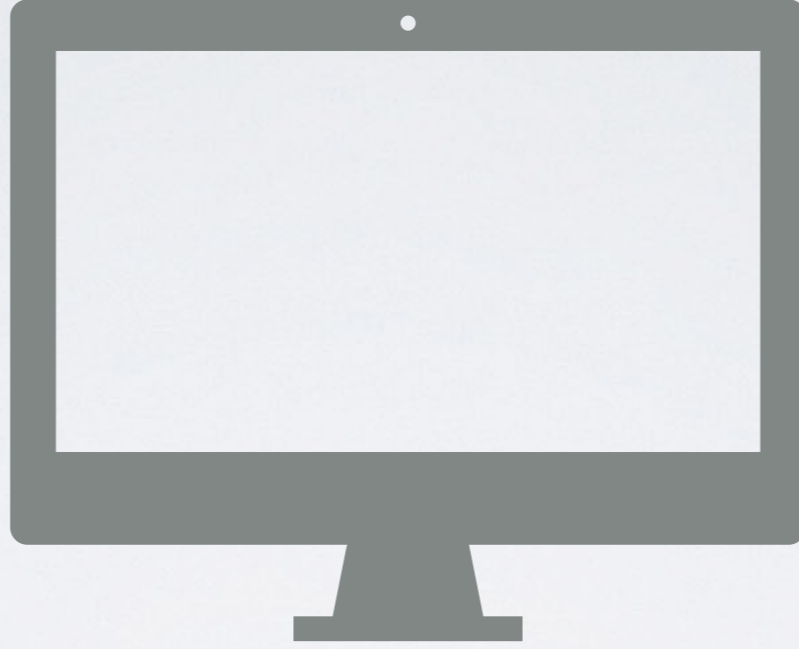


Genel Bir Cüzdan Yapısı



Blockchain

Tüm Geçmiş

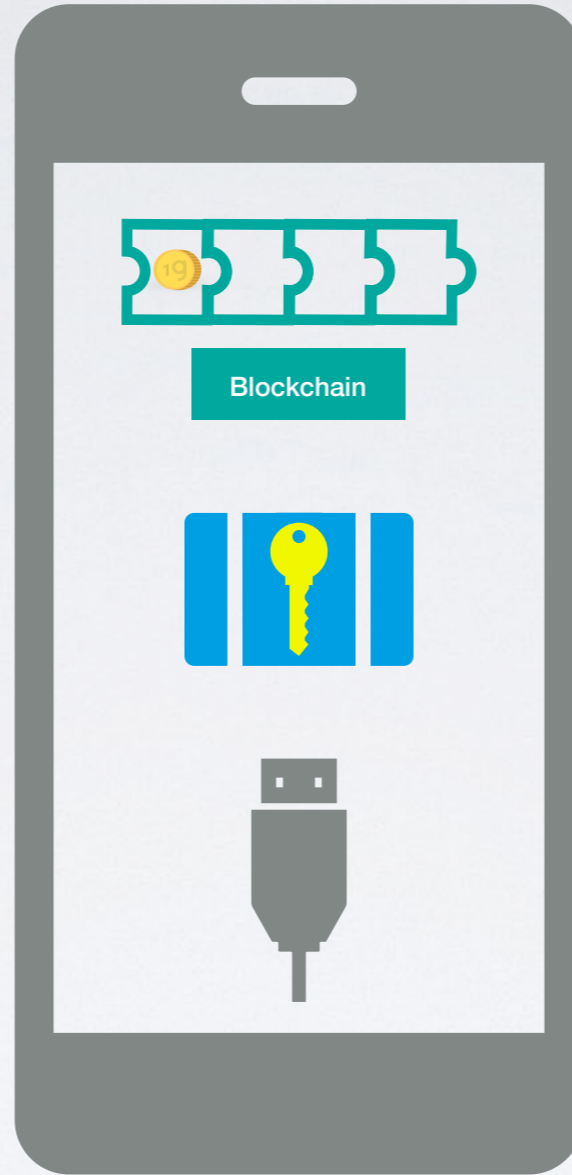


Gizli Anahtar

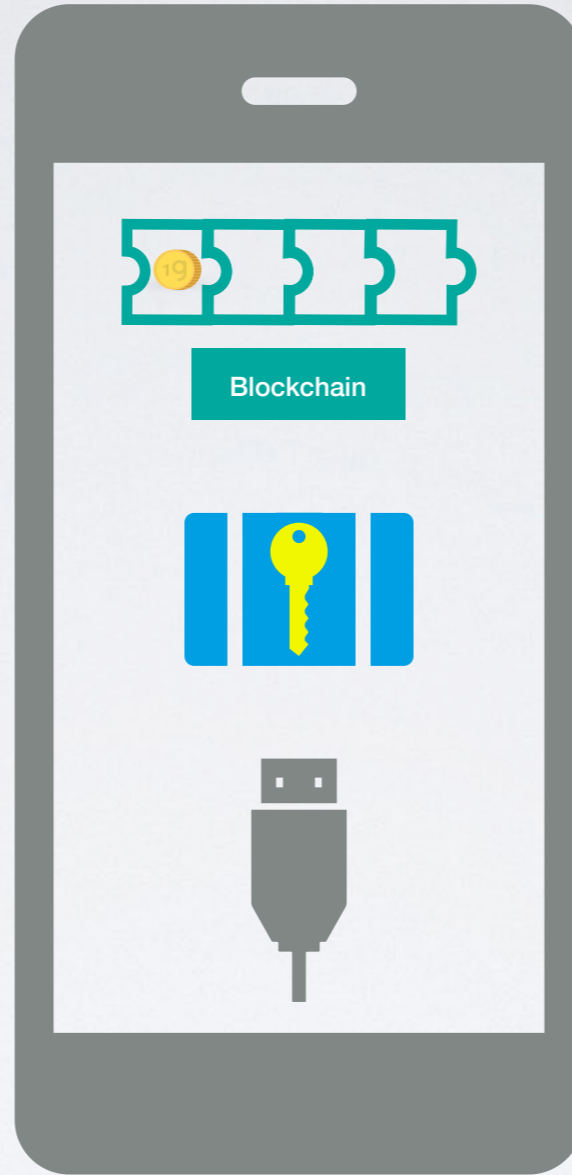


Sürekli Bağlantı

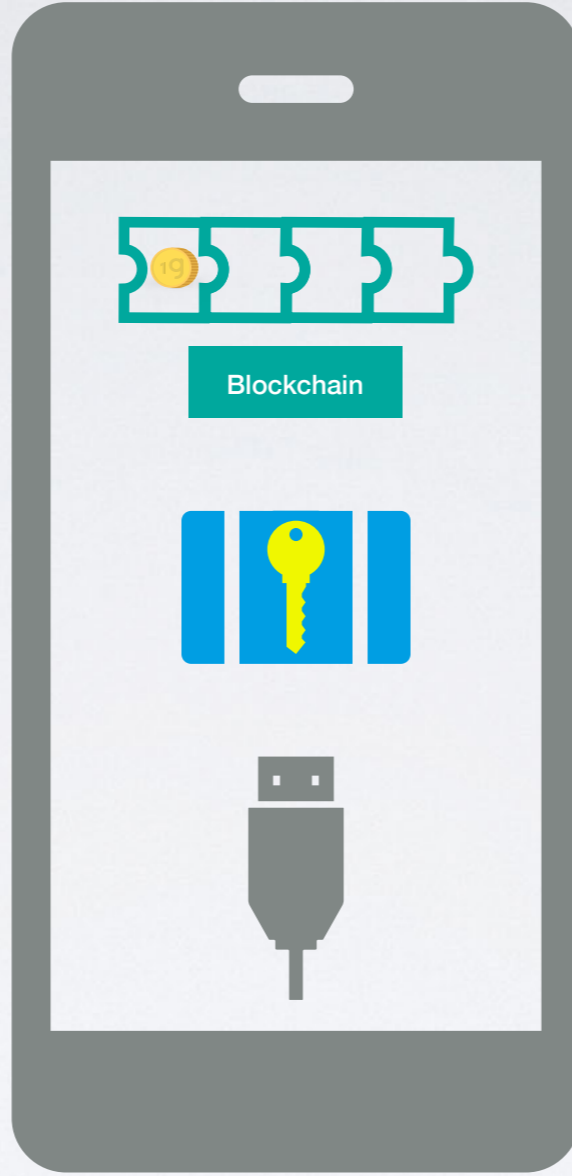
Mobilde Cüzdan



Mobilde Cüzdan

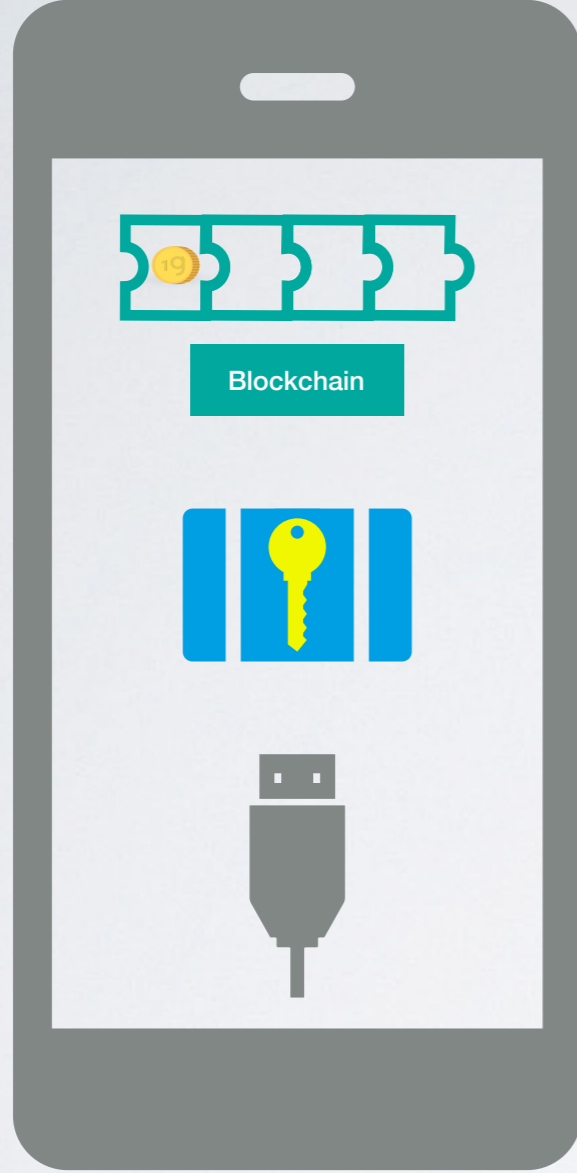


Mobilde Cüzdan



Uygun Değil

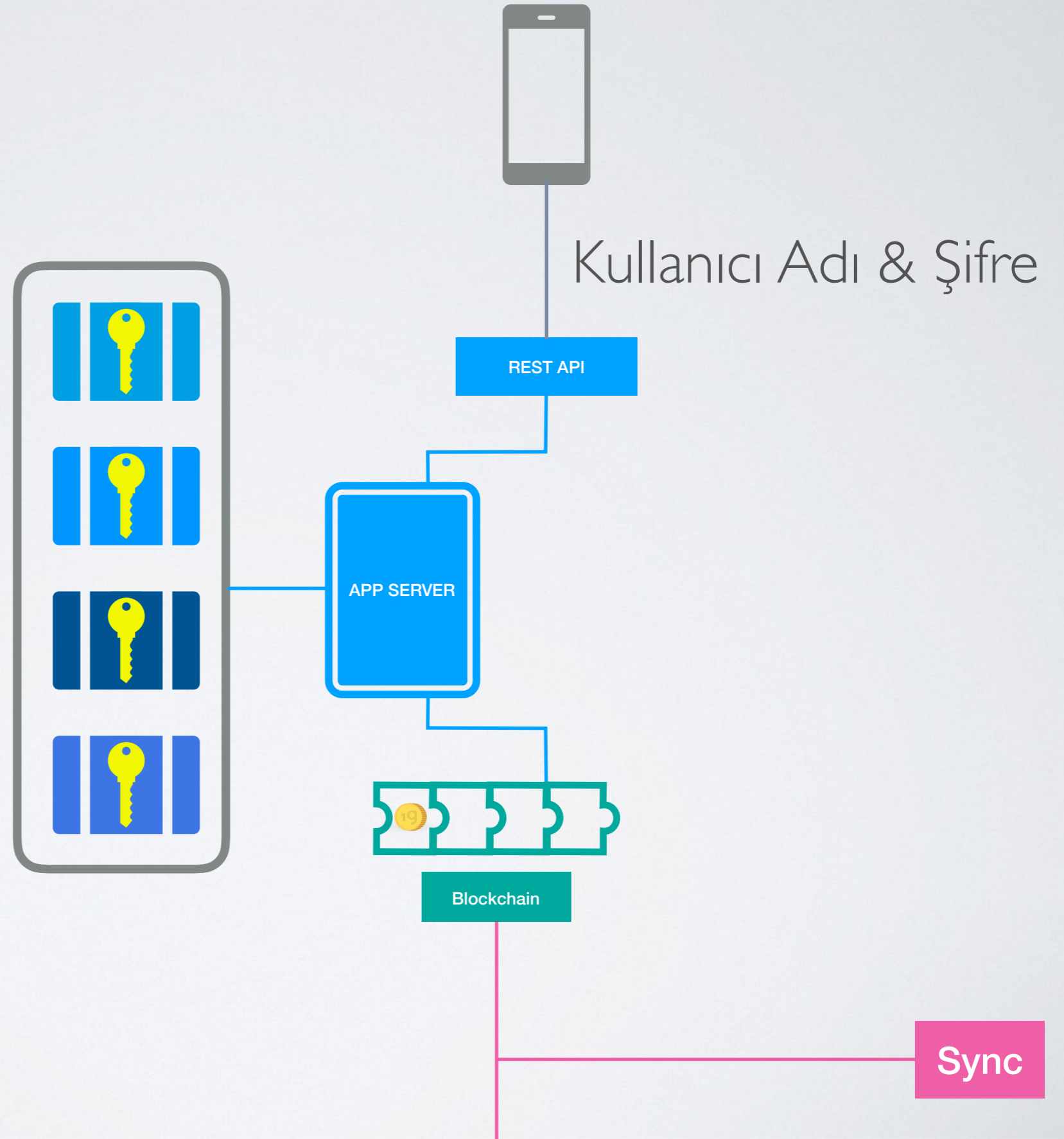
Mobilde Cüzdan



Uygun Değil

- Veri Depolama
- Sürekli Bağlantı
- Private Key Silinmesi/Kaybolması
- Pil Kullanımı

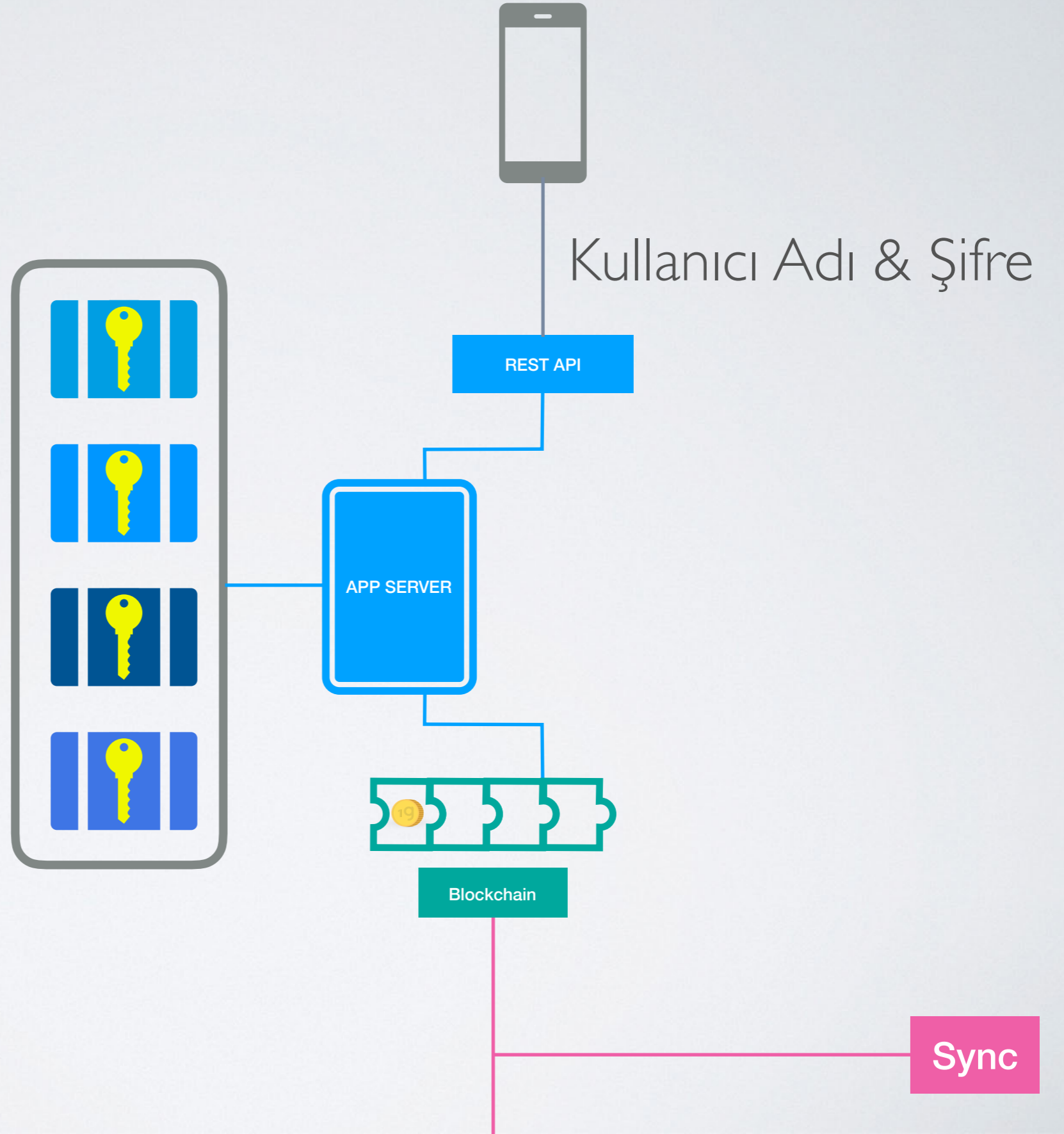
Bulutta Cüzdan Hizmeti



Bulutta Cüzdan Hizmeti

Sorunlar

- Kullanıcı varlıklarının gerçek sahibi olmuyor
- Çalınma durumunda tüm anahtarlar beraber çalınıyor



İdeal Senaryo



Varlıkların gerçek sahibi kullanıcı olmalı

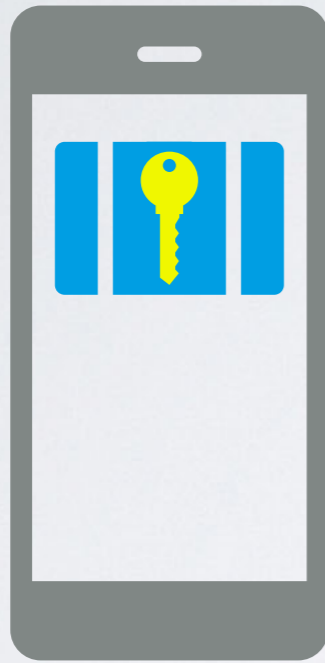


Tarihçe ve büyük veri telefonda tutulmamalı

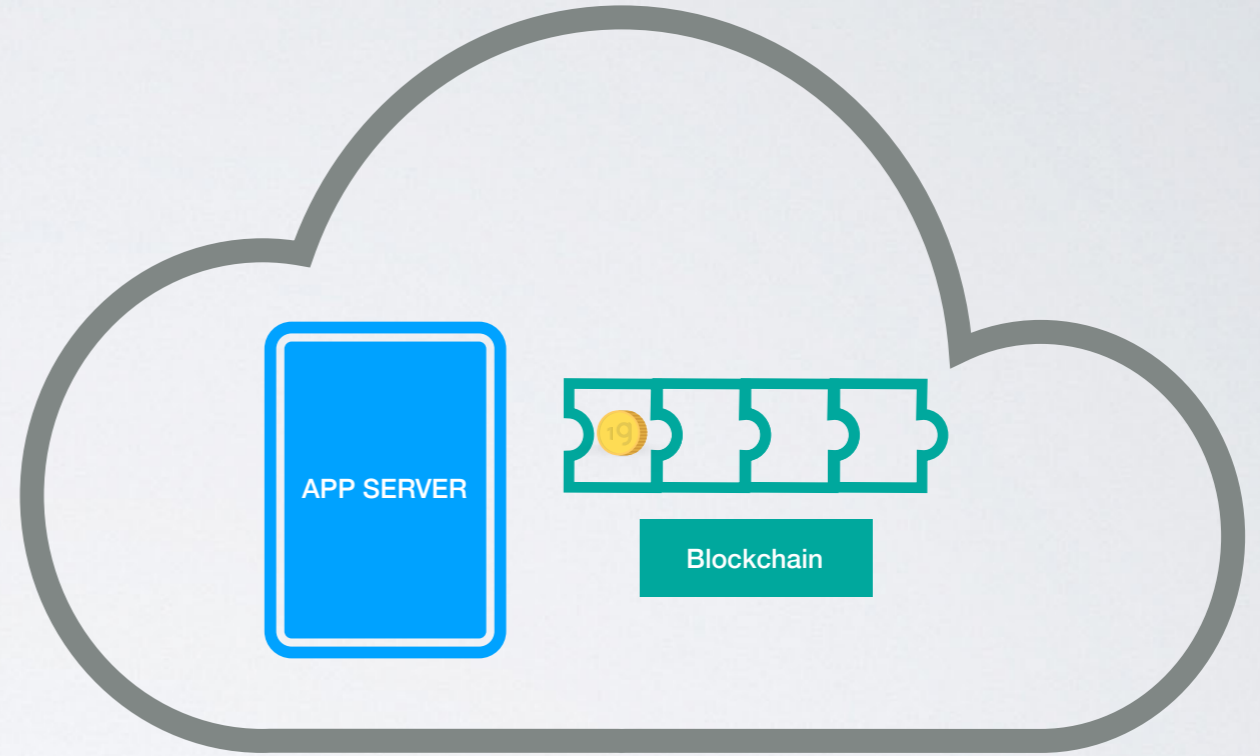


Telefonun sürekli bağlı olmaya ihtiyacı olmamalı

Hibrit Cüzdan

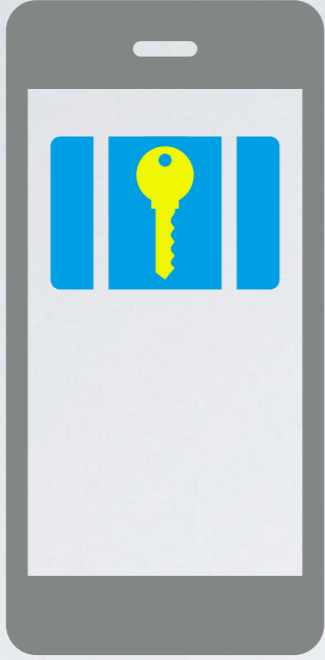


İmzalama

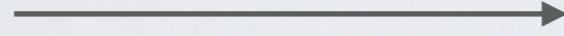
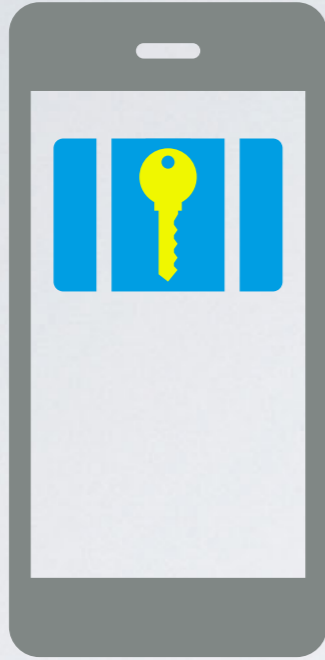


Diğer İşlemler (Sandbox)

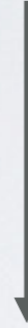
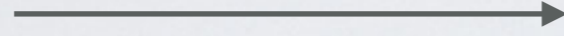
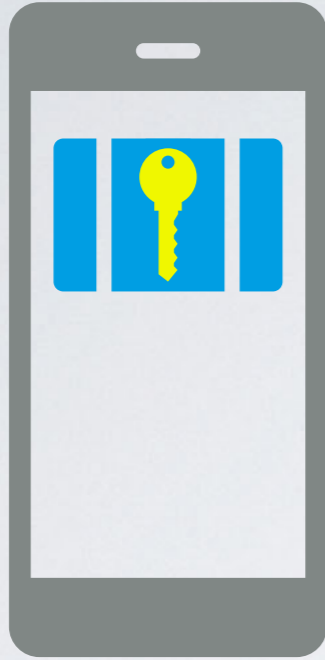
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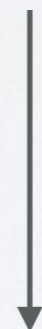
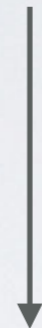
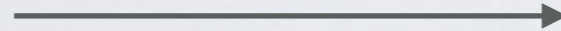
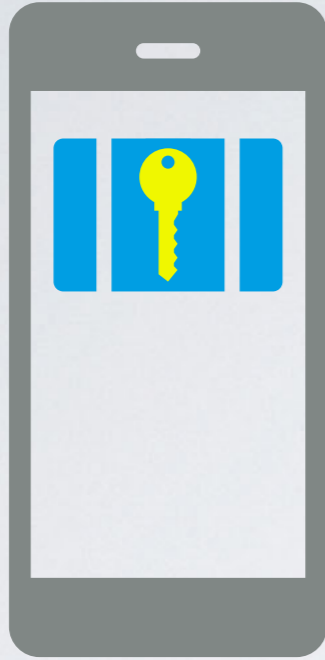
Para G?nderme



Para G?nderme

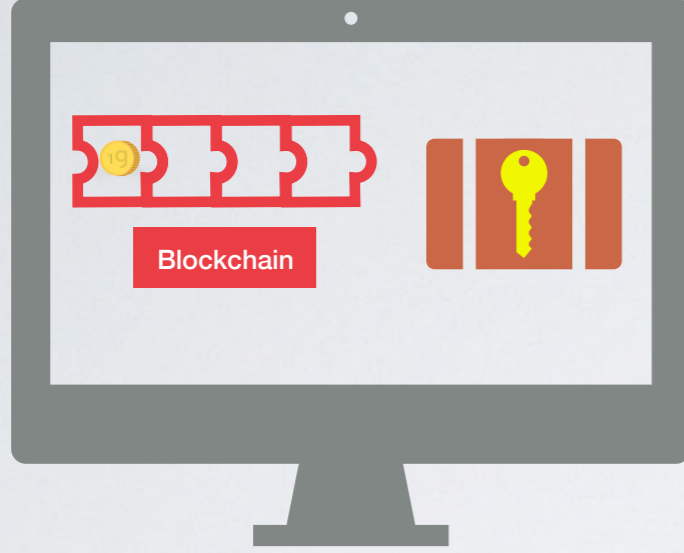


Para Gönderme

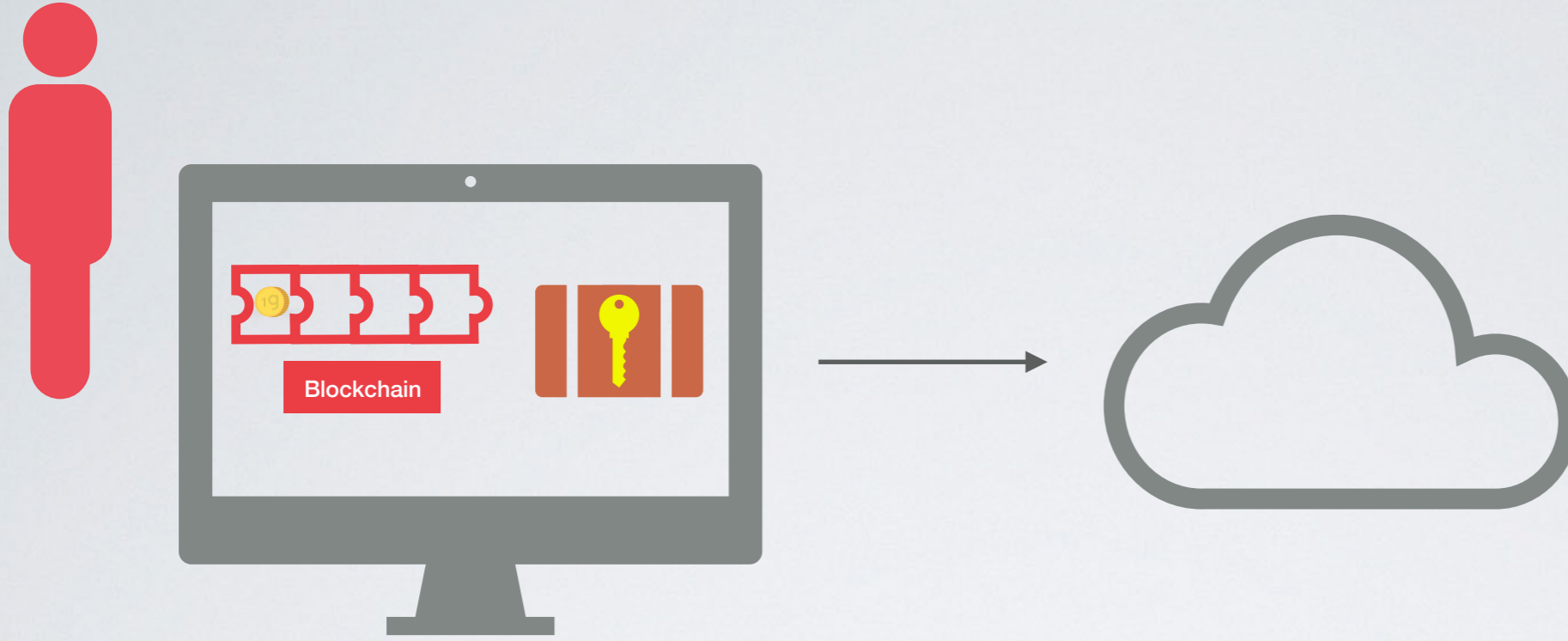


Blockchain

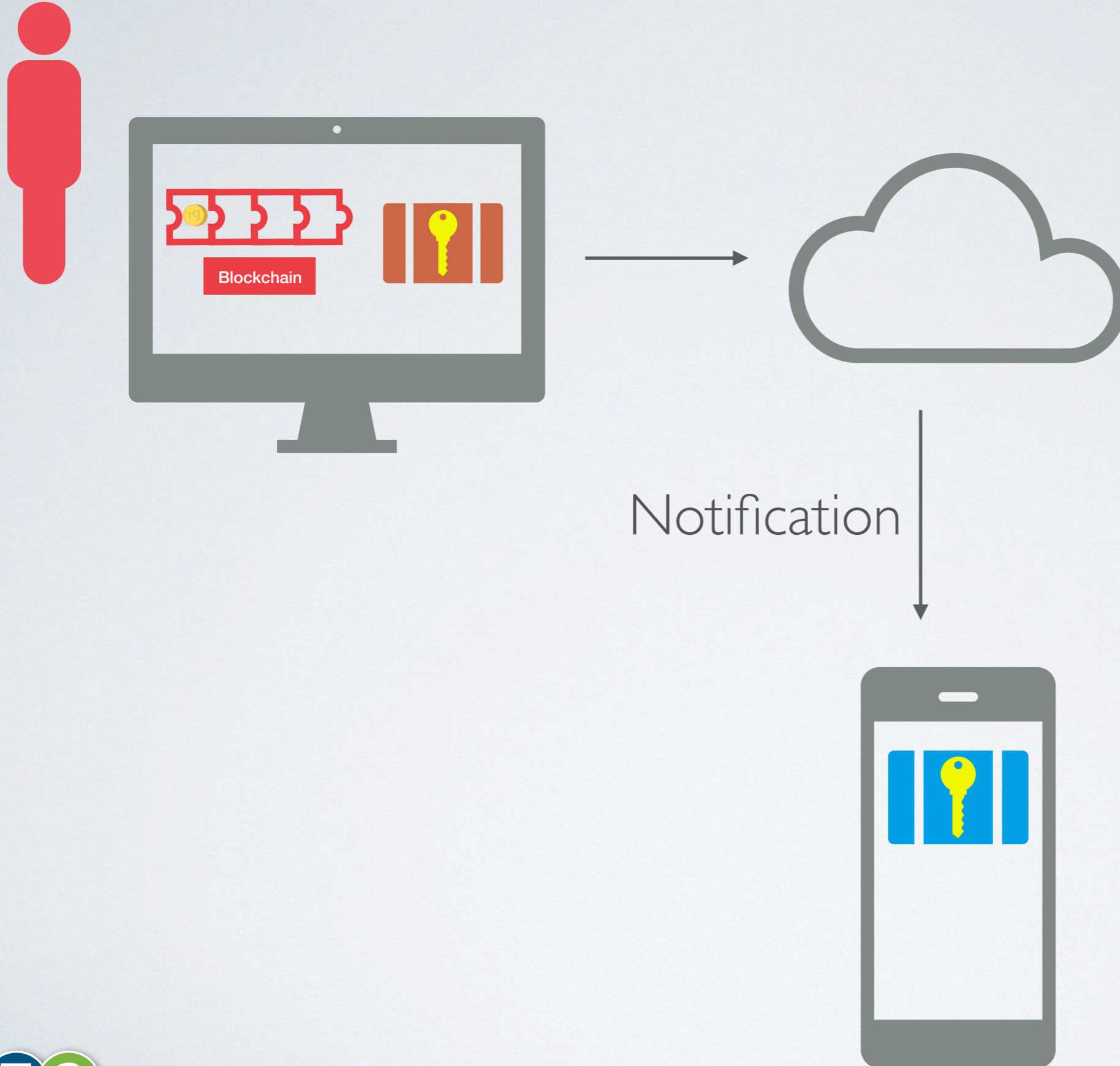
Çift İmza



Çift İmza



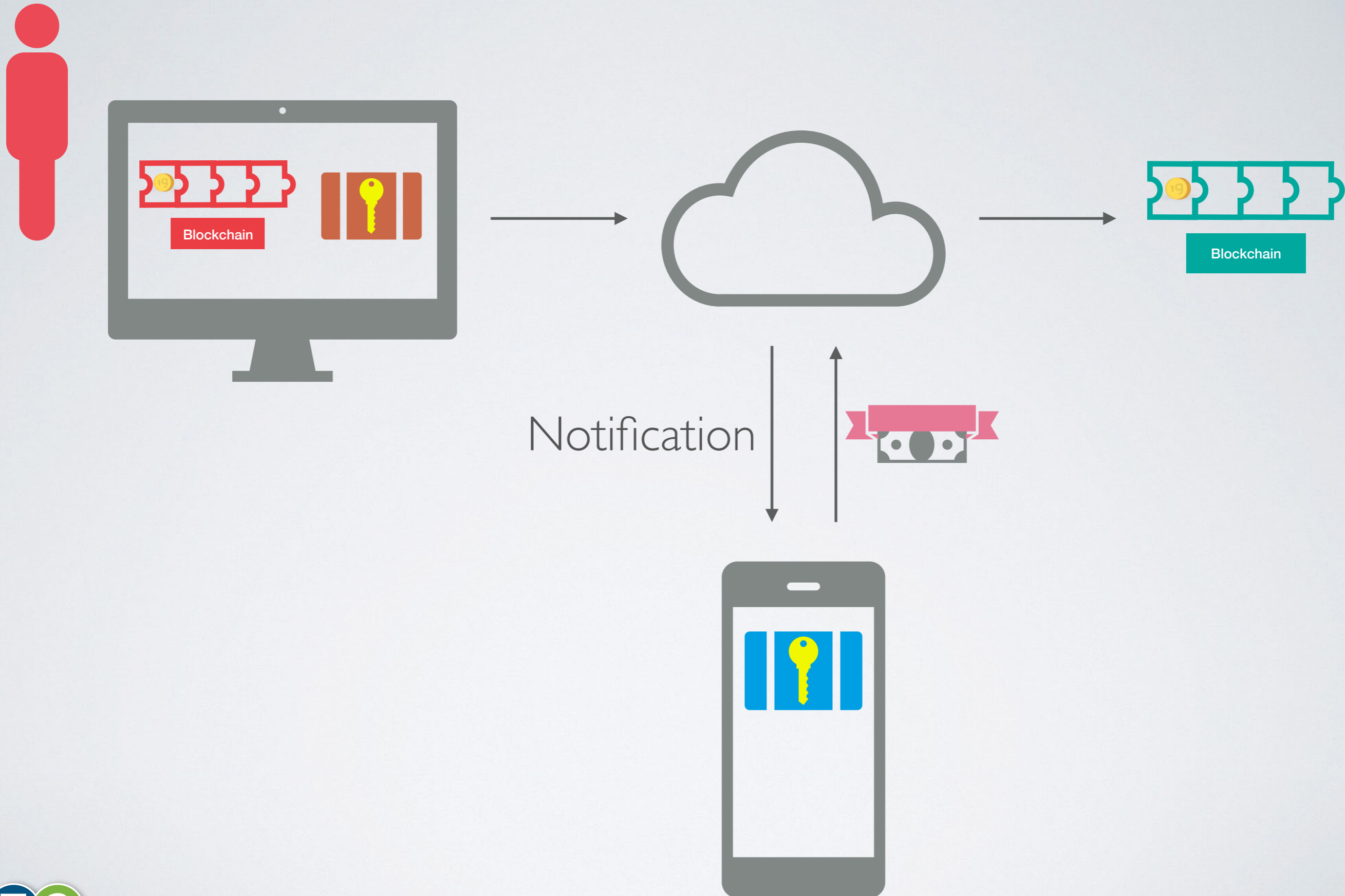
Çift İmza



Çift İmza



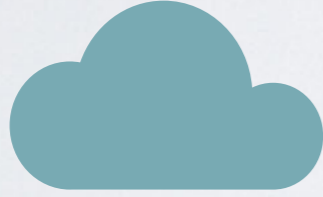
Çift İmza



Politika Tabanlı İmzalama



Belli kořulları tanımlayabilsin



Kořullar geerli ise otomatik imzalasın



Kullanıcının gizli anahtarı asla aığa ıkarılamayacak

Politika Tabanlı İmzalama



Politika

- Serialized $[0, 1]^*$
- Domain Specific Language

Örnek: Ali'den gelen tüm işlemleri kabul et.

Politika Tabanlı İmzalama



Politika

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İşlem/İstek

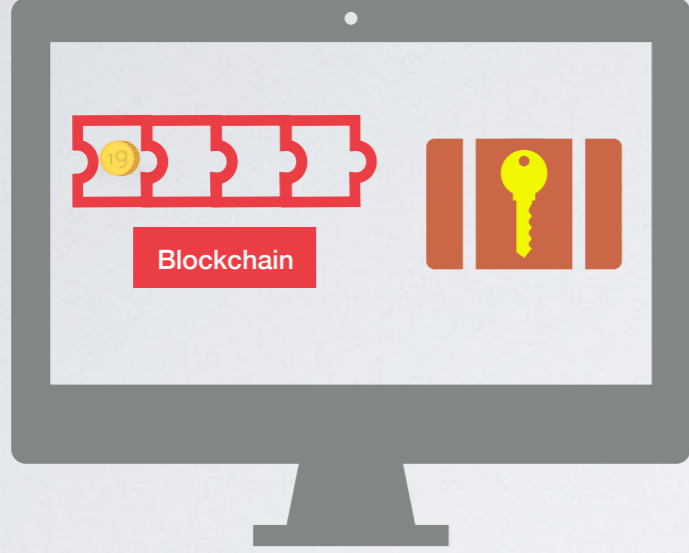
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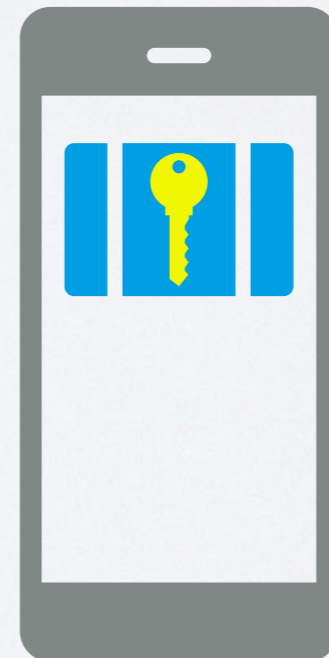
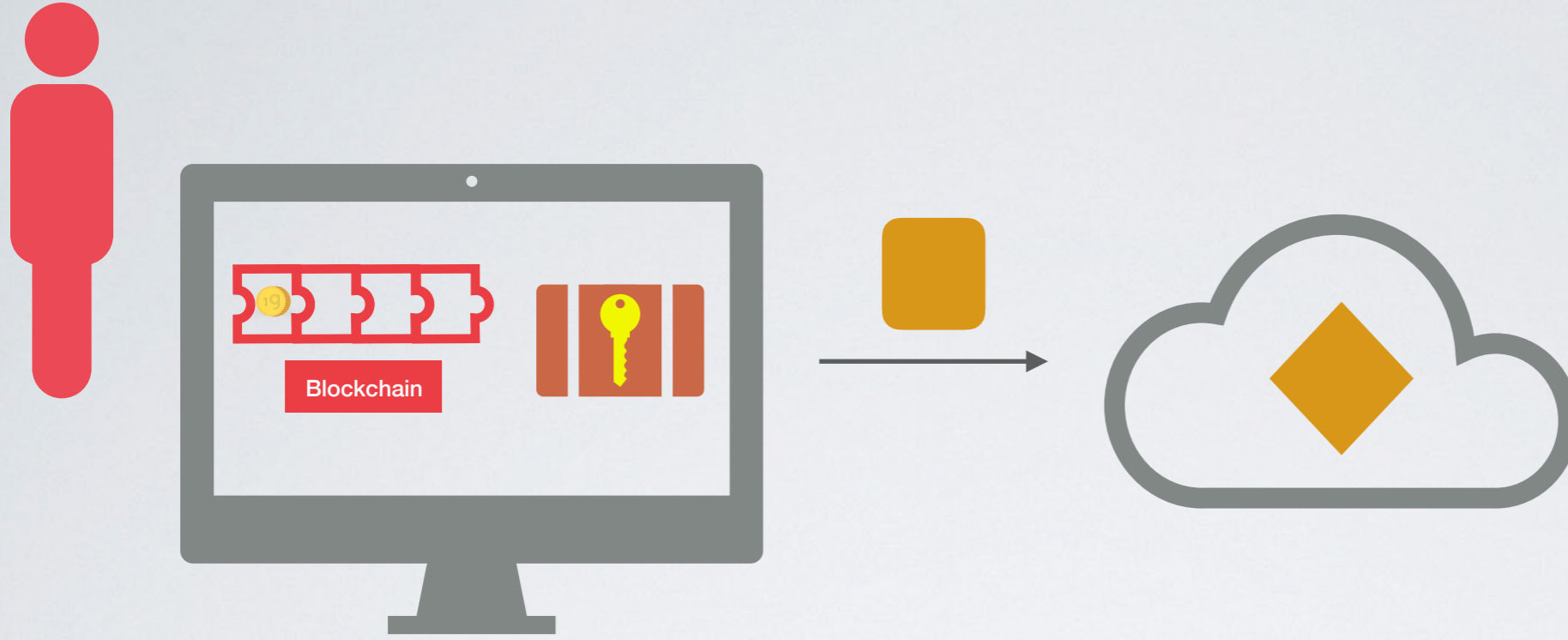
İmzalanmış İşlem

*Non-Interactive Zero Knowledge Proof

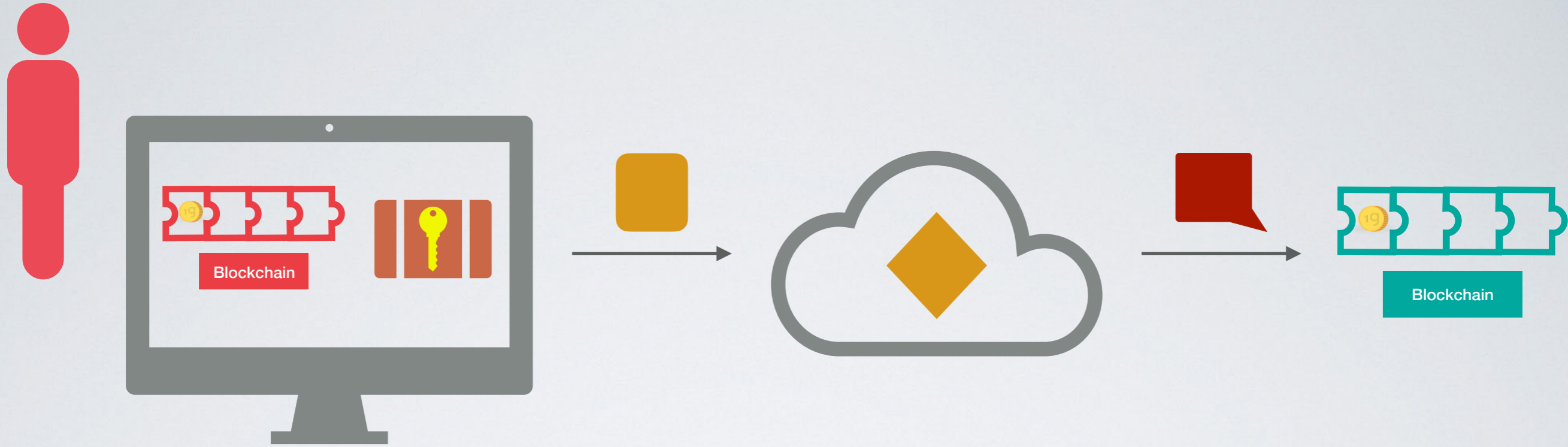
Politika Tabanlı İmzalama



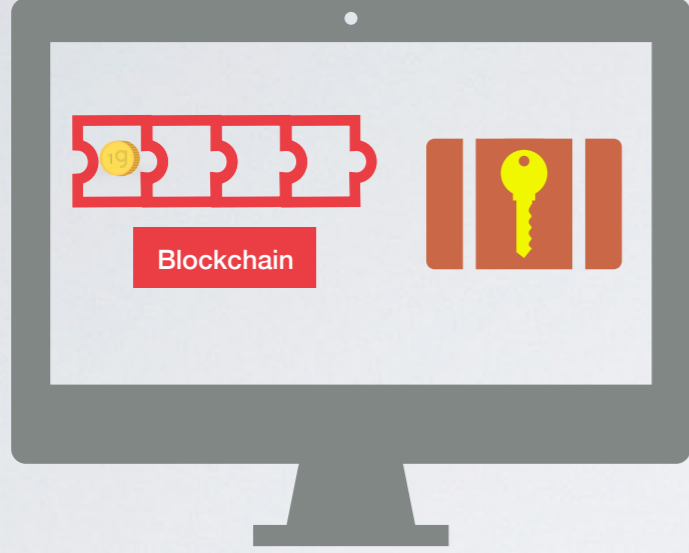
Politika Tabanlı İmzalama



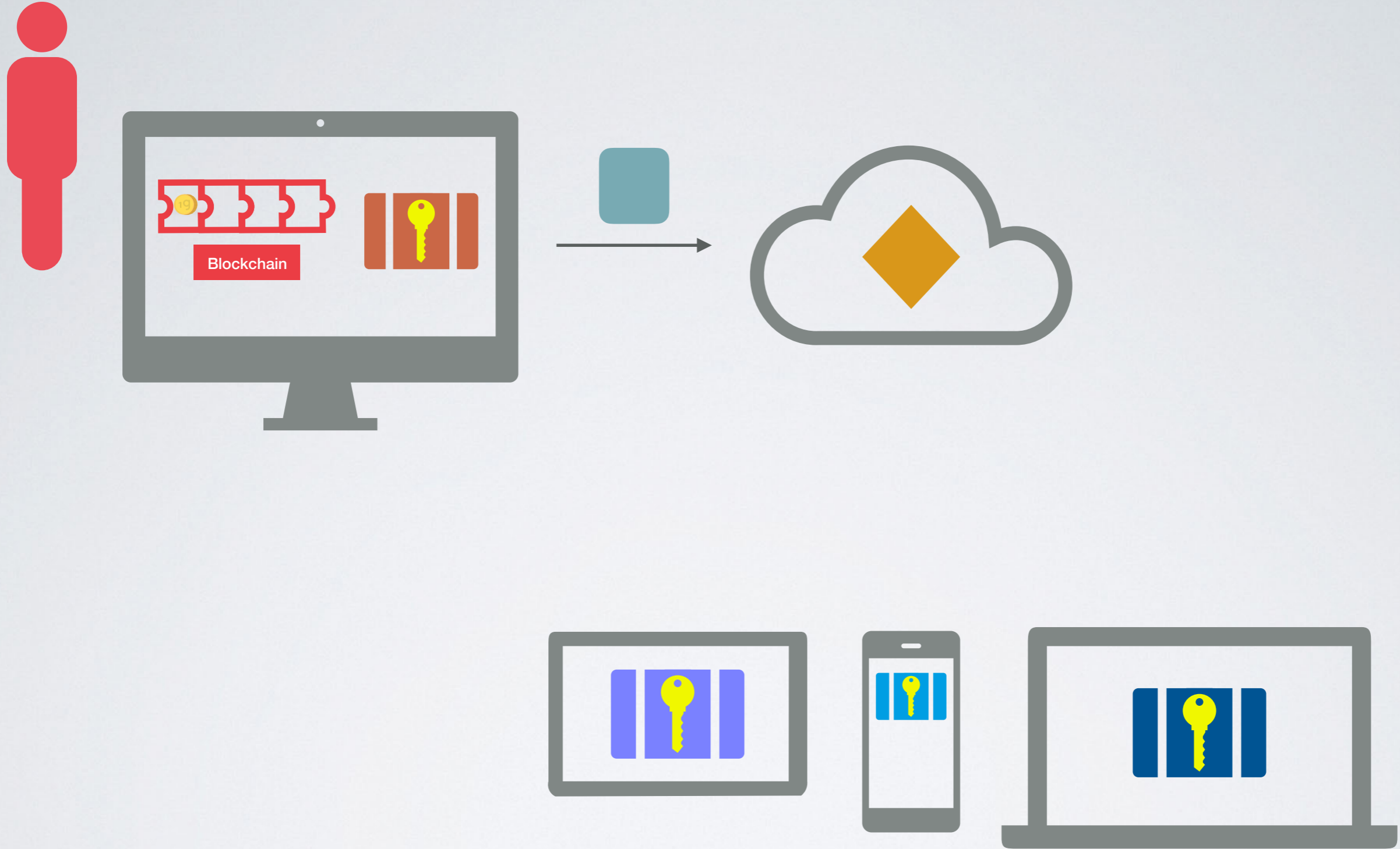
Politika Tabanlı İmzalama



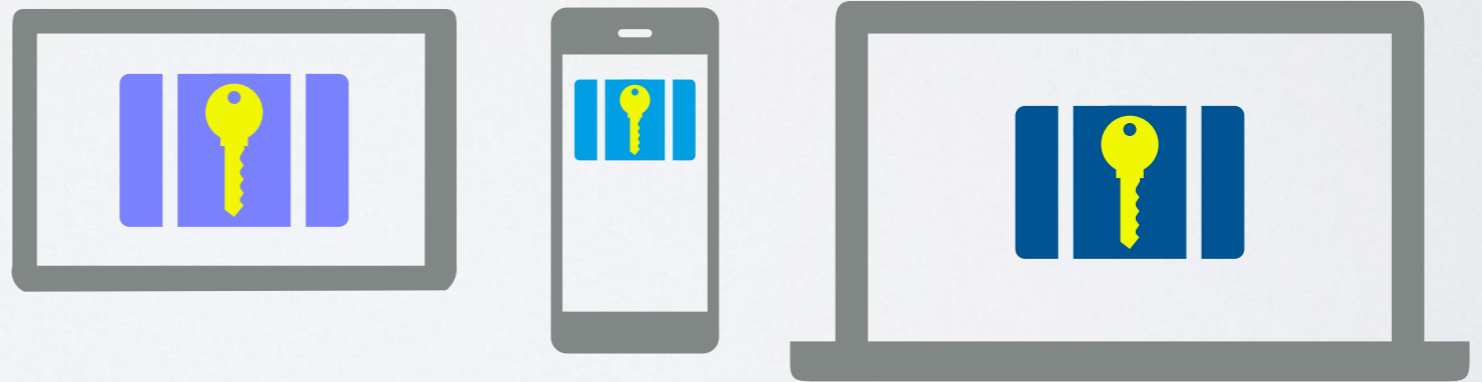
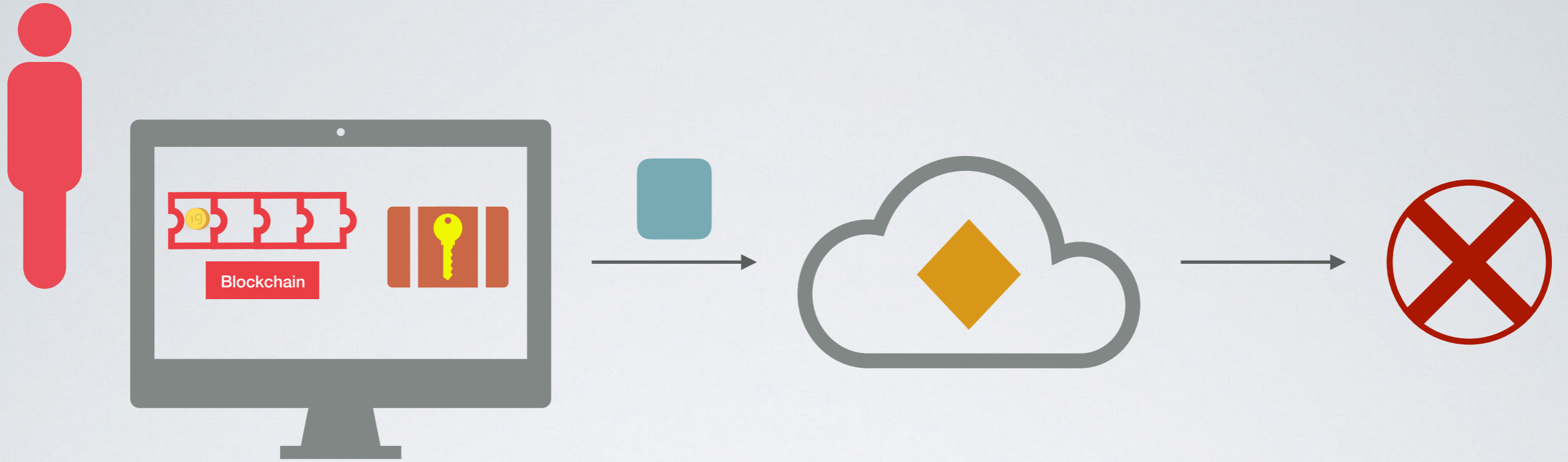
Politika Tabanlı İmzalama



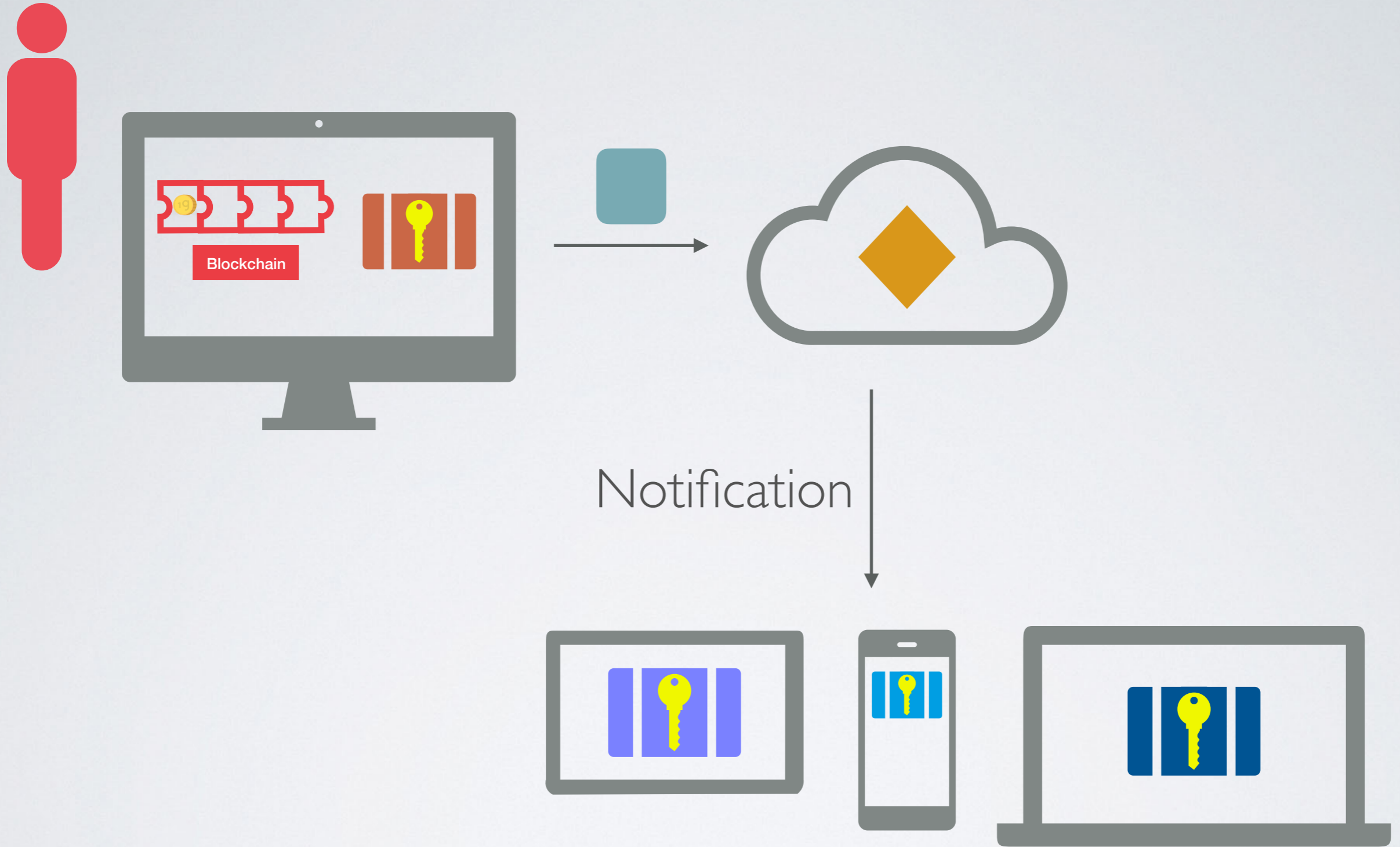
Politika Tabanlı İmzalama



Politika Tabanlı İmzalama

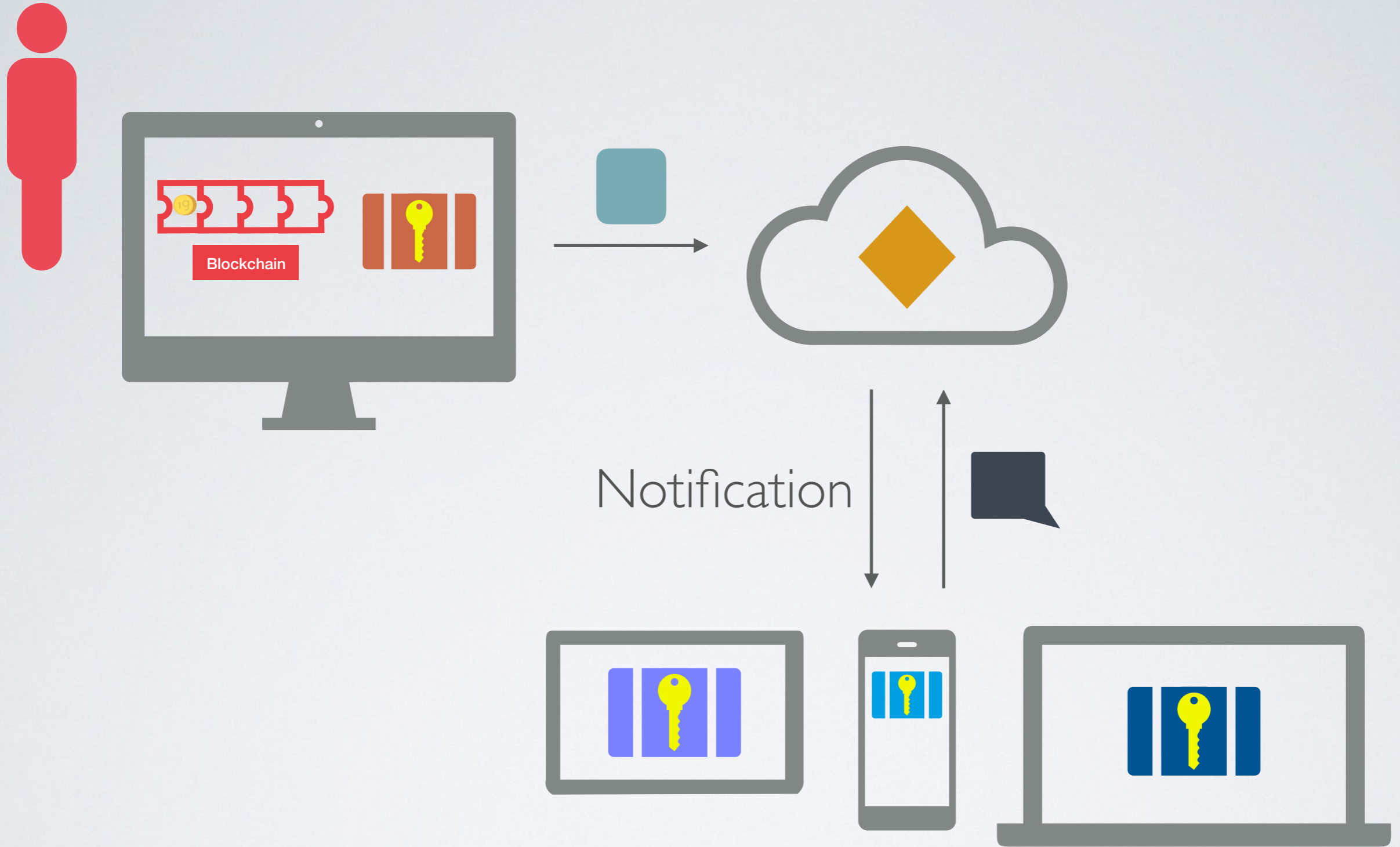


Politika Tabanlı İmzalama



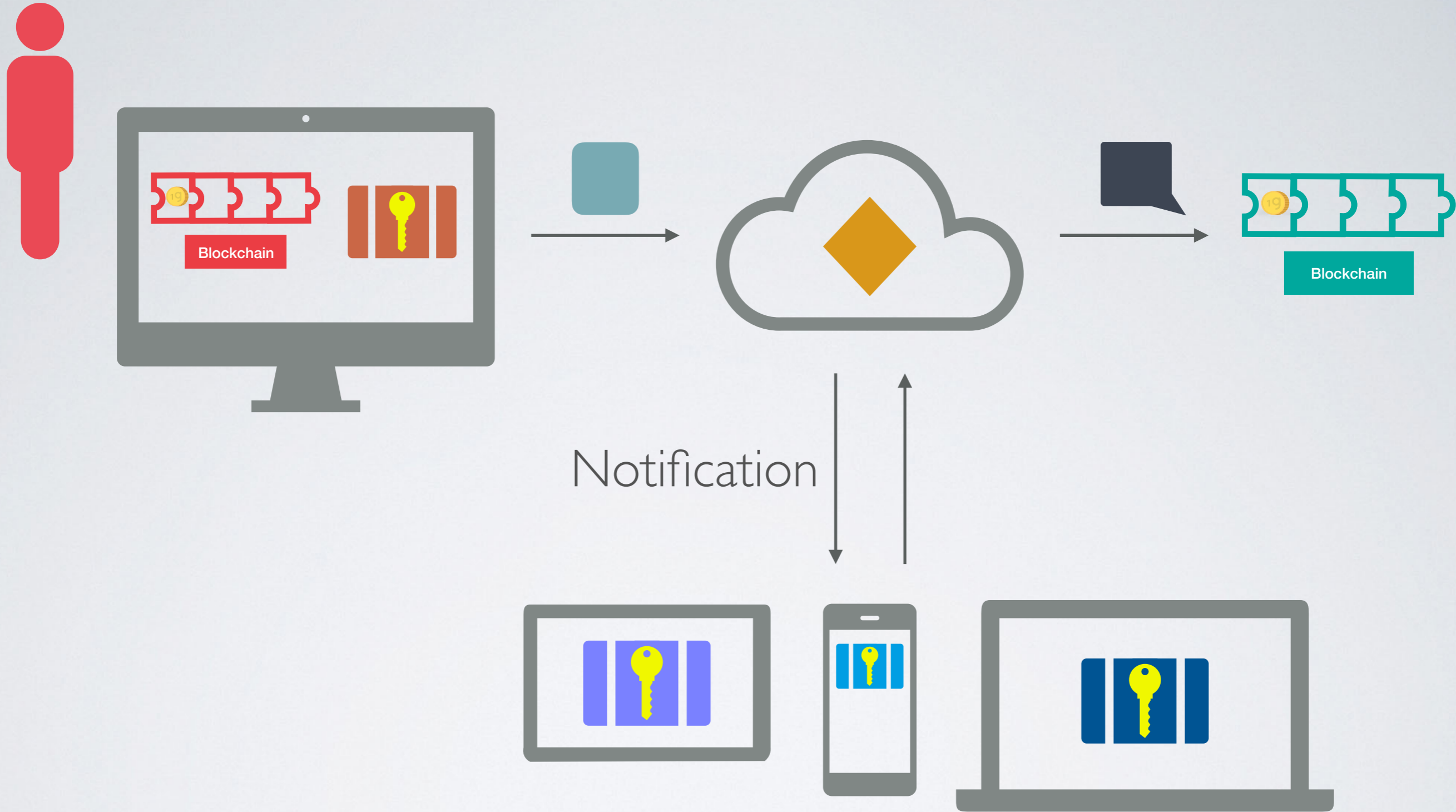
Eşik Kriptografisi

Politika Tabanlı İmzalama



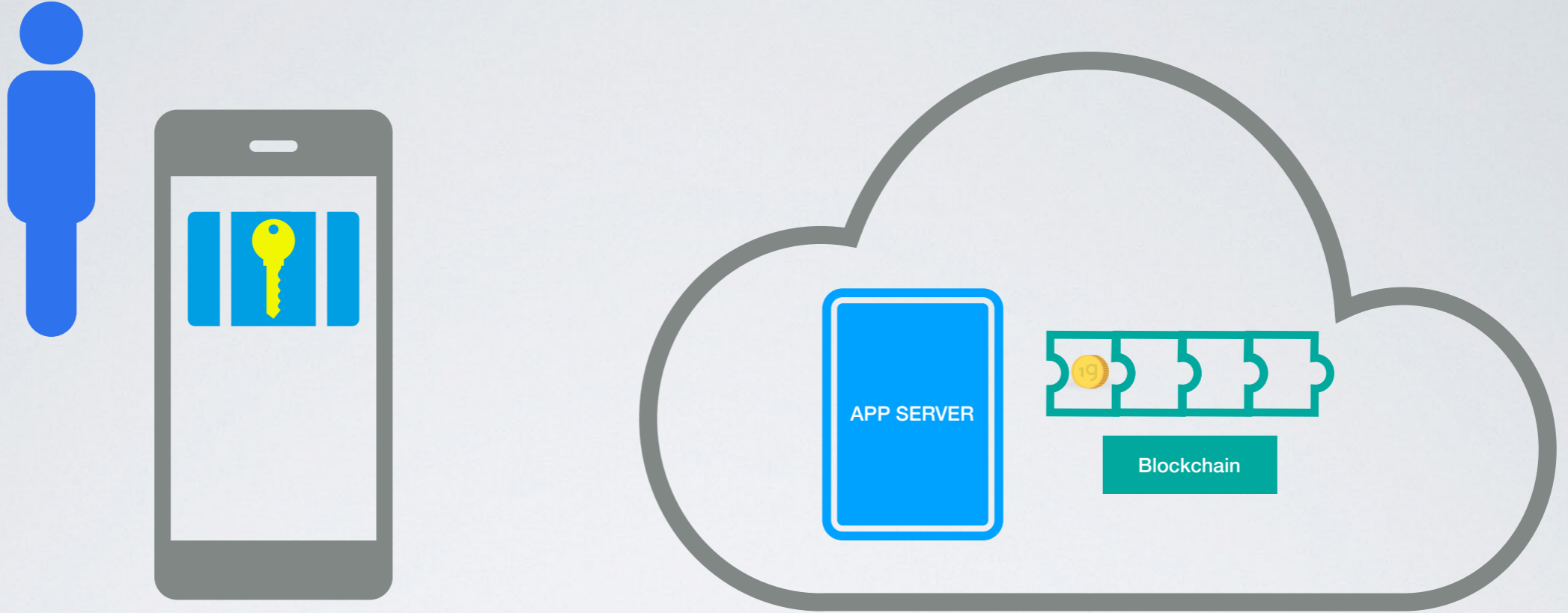
Eşik Kriptografisi

Politika Tabanlı İmzalama



Eşik Kriptografisi

Özet



Politika

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İşlem/İstek

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İmzalı İşlem