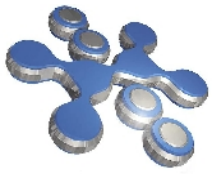




Master Universitario di I livello in
Progettazione e gestione di sistemi di rete

Digital Terrestrial Television

**Uso di Smart-Card non-CA e possibili
transazioni di pagamento**



Dall'analogico al digitale

Frequenza Canale – portata 24 Mbit/s

MPEG a/v MHP TV	MPEG a/v MHP TV	MPEG a/v TV	MPEG audio Radio	IP DATI*
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Digital broadcasting

Data broadcasting



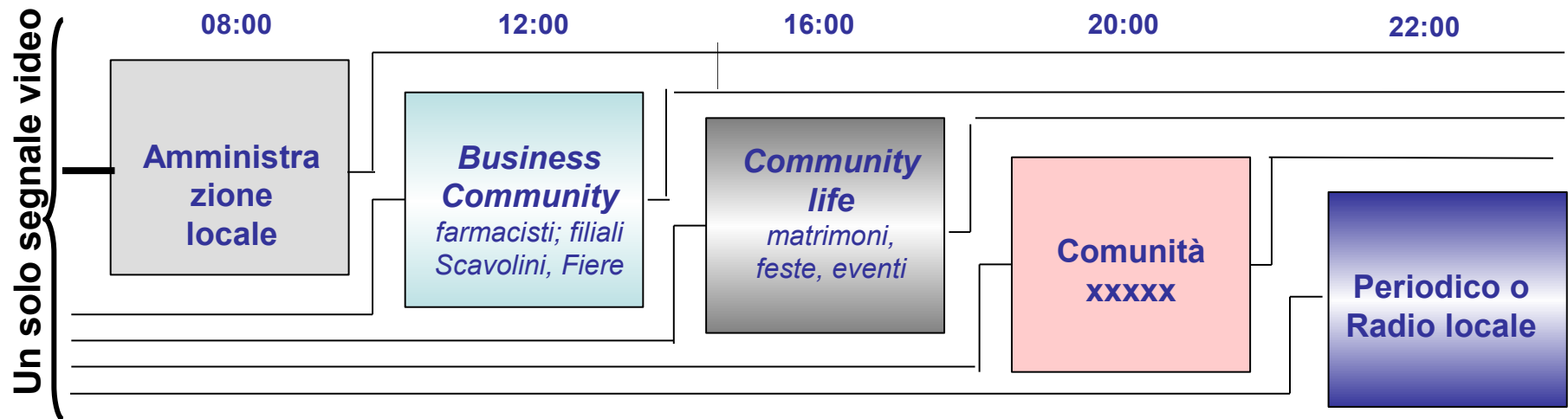
- ✓ IP Multicast e Content Delivery
- ✓ Sistemi di navigazione satellitare
- ✓ Video on demand
- ✓ Video multi-piattaforma
- ✓ Servizi personalizzati



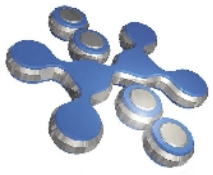
Dall'analogico al digitale terrestre (2)



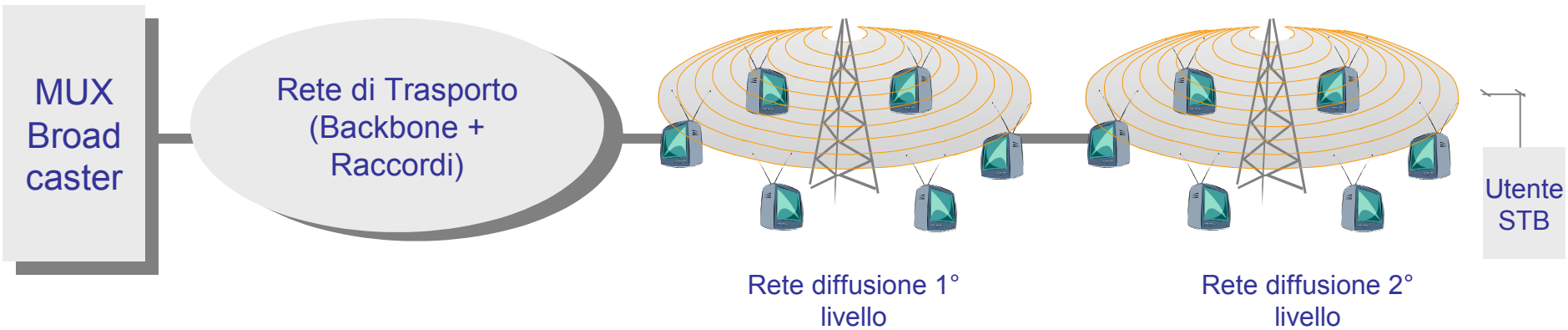
Canale Comunale nel MUX gestito (esempio)

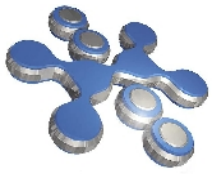


E' possibile inoltre ottimizzare l'uso della banda con un servizio push che aggiorna la library dei clienti dotati di PVR

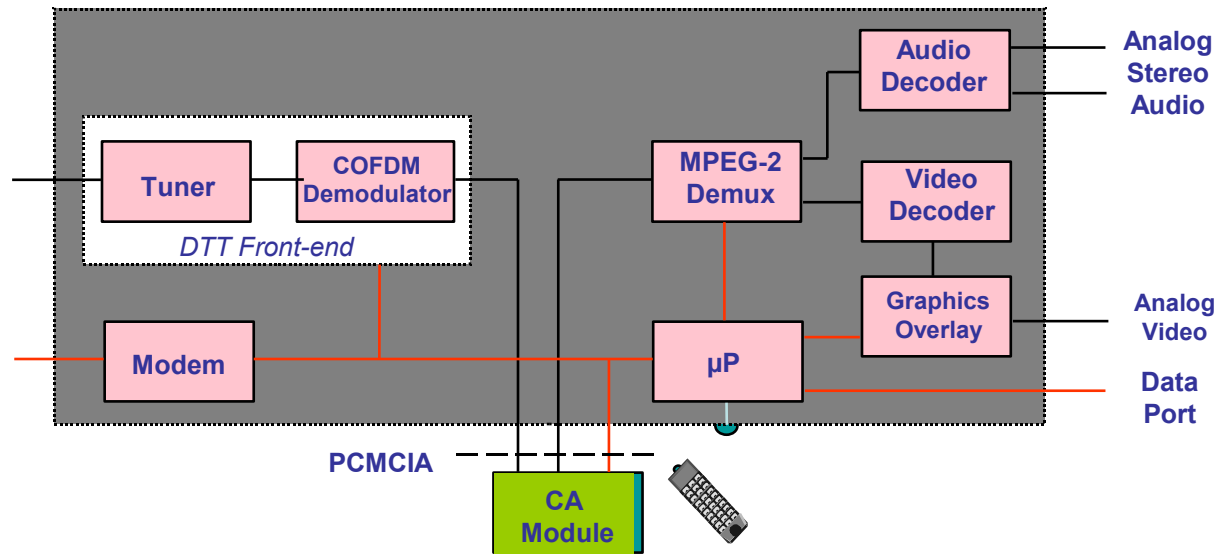


Architettura di rete



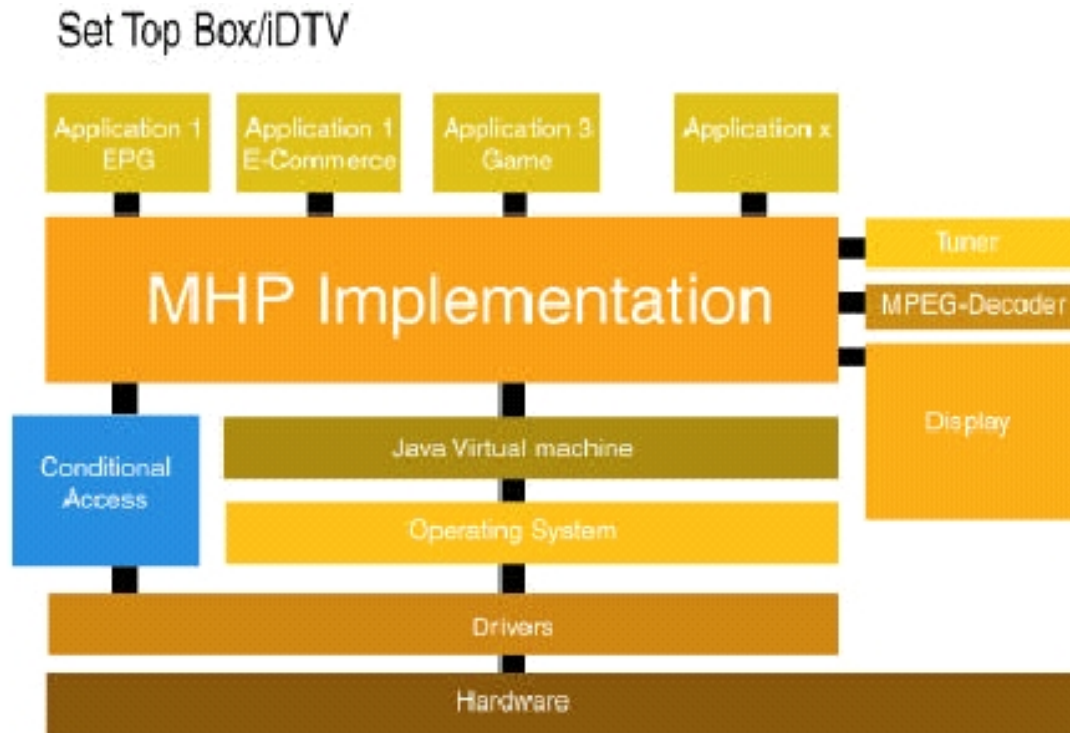


Dispostivo STB



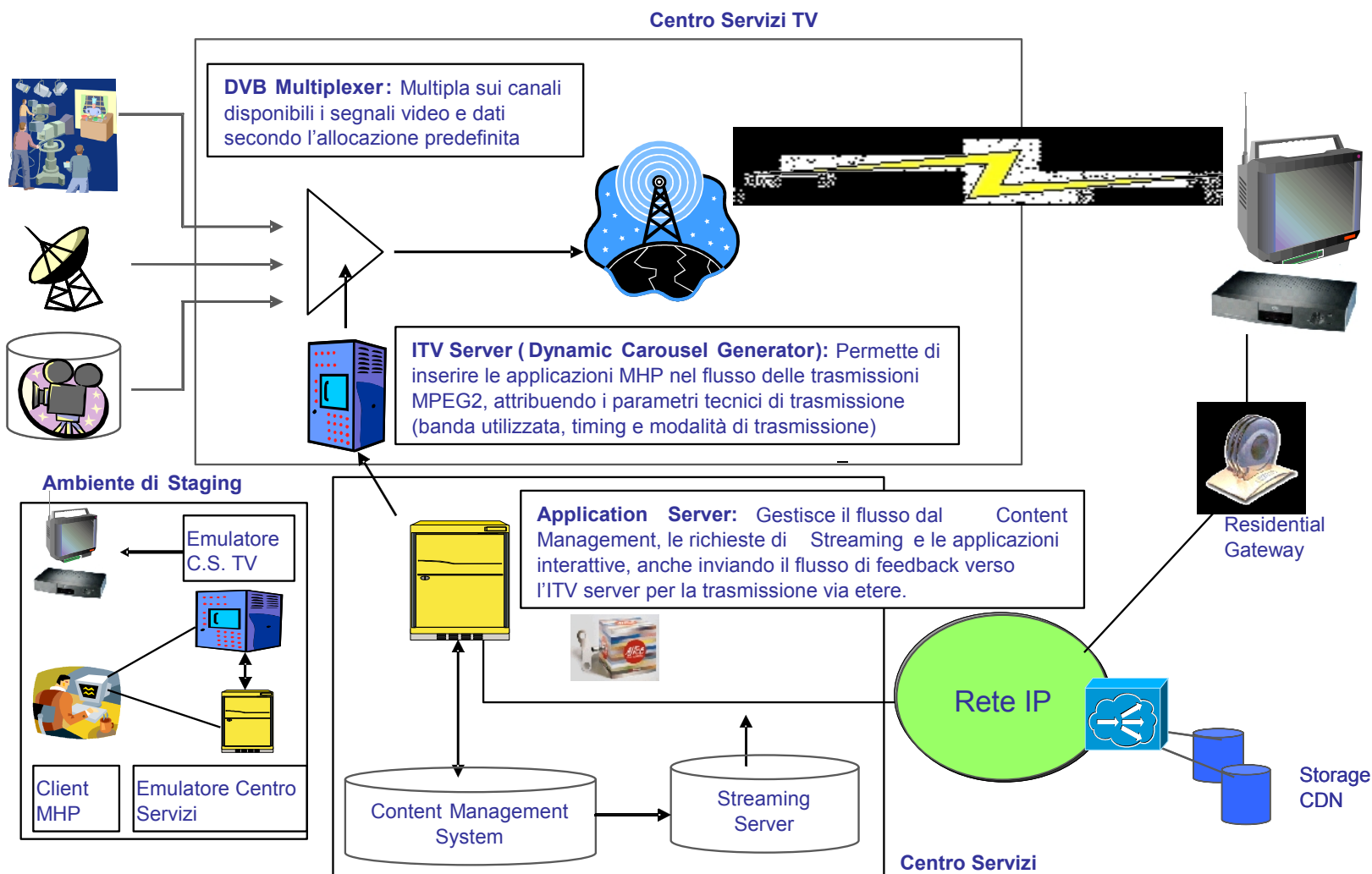


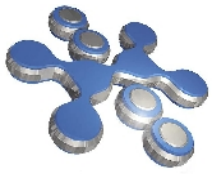
Embedded Java Environment



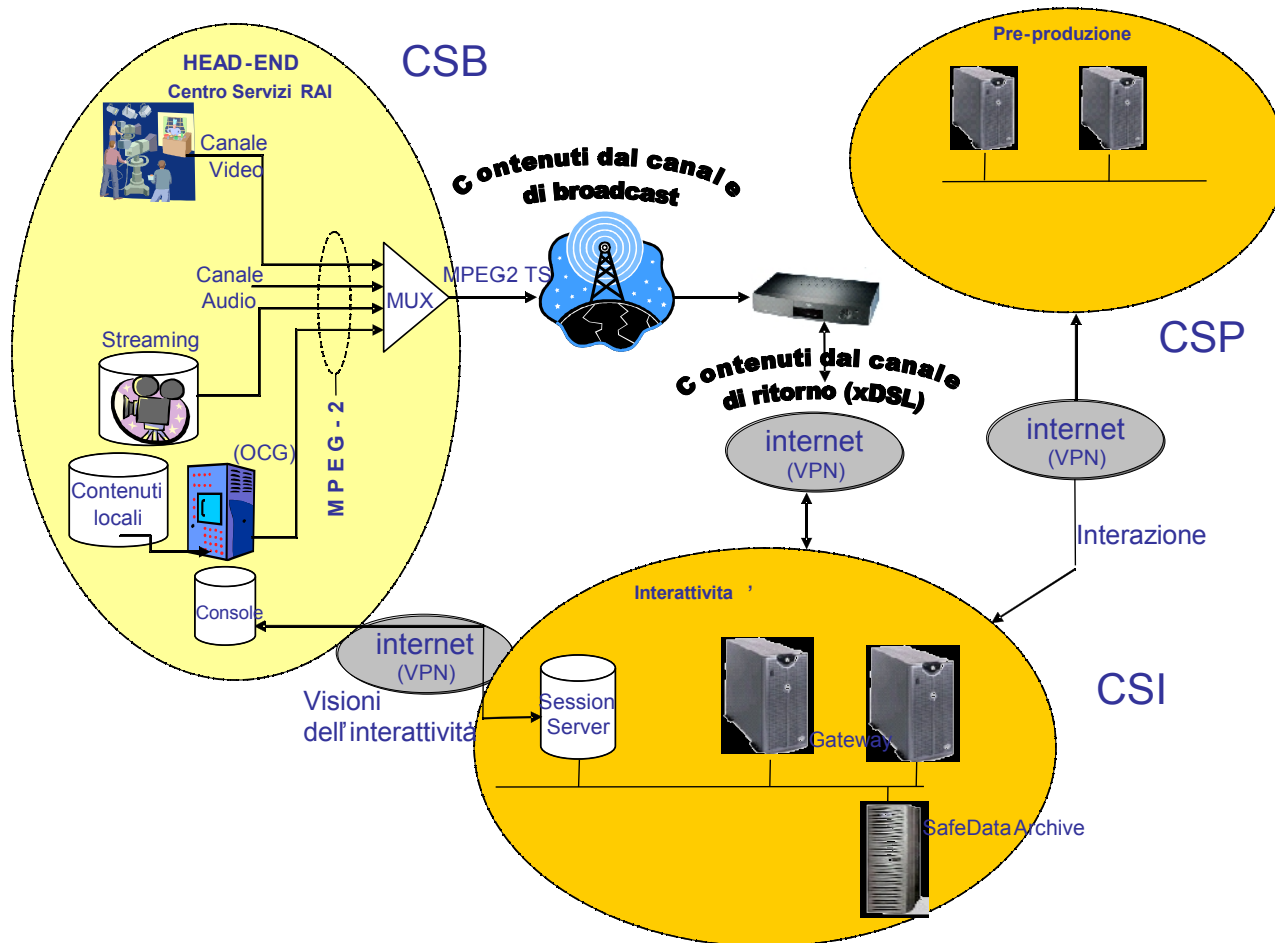


Un esempio di Centro Servizi



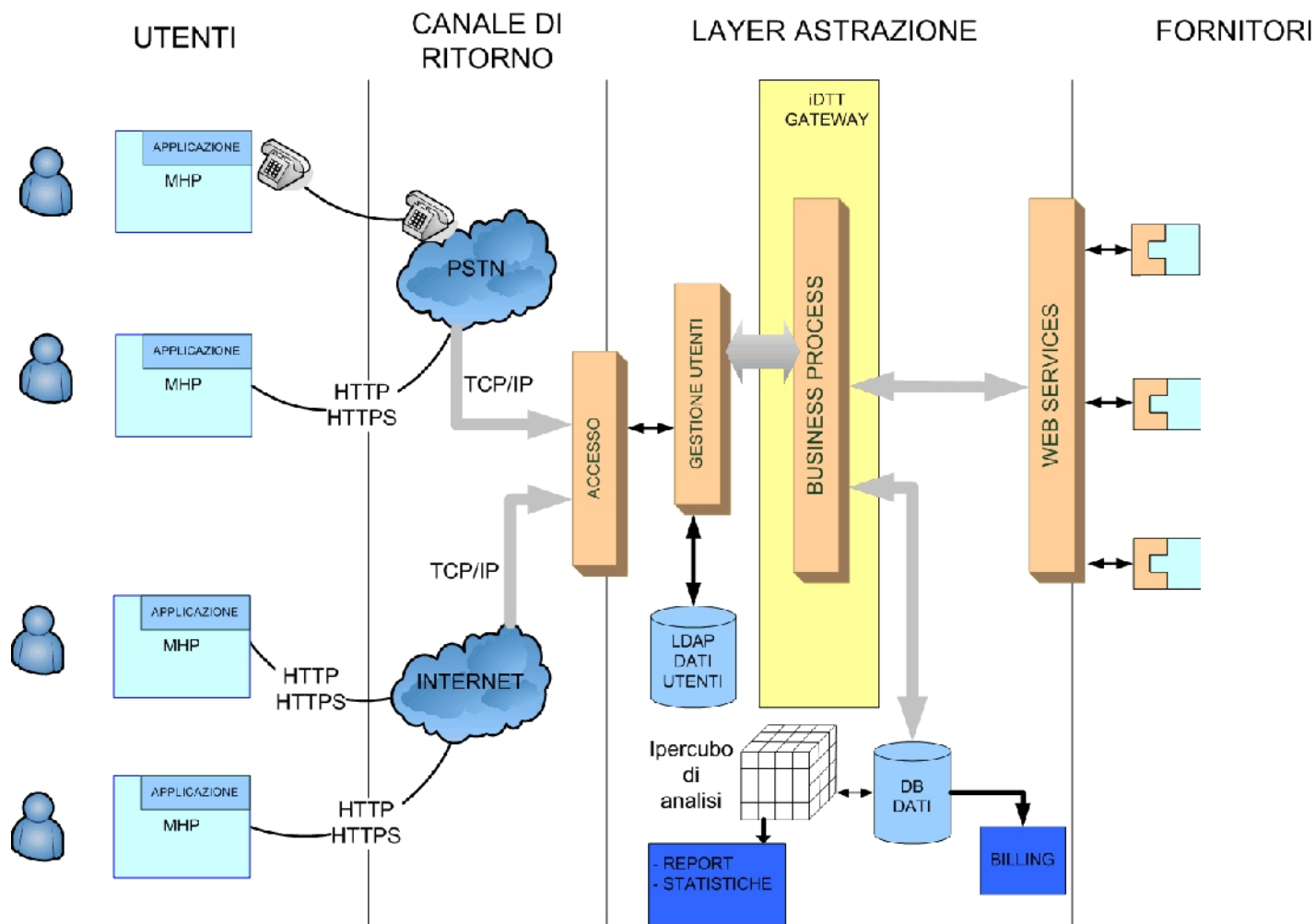


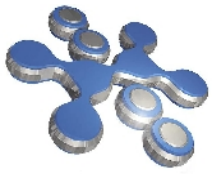
Un esempio di DTT interactive chain



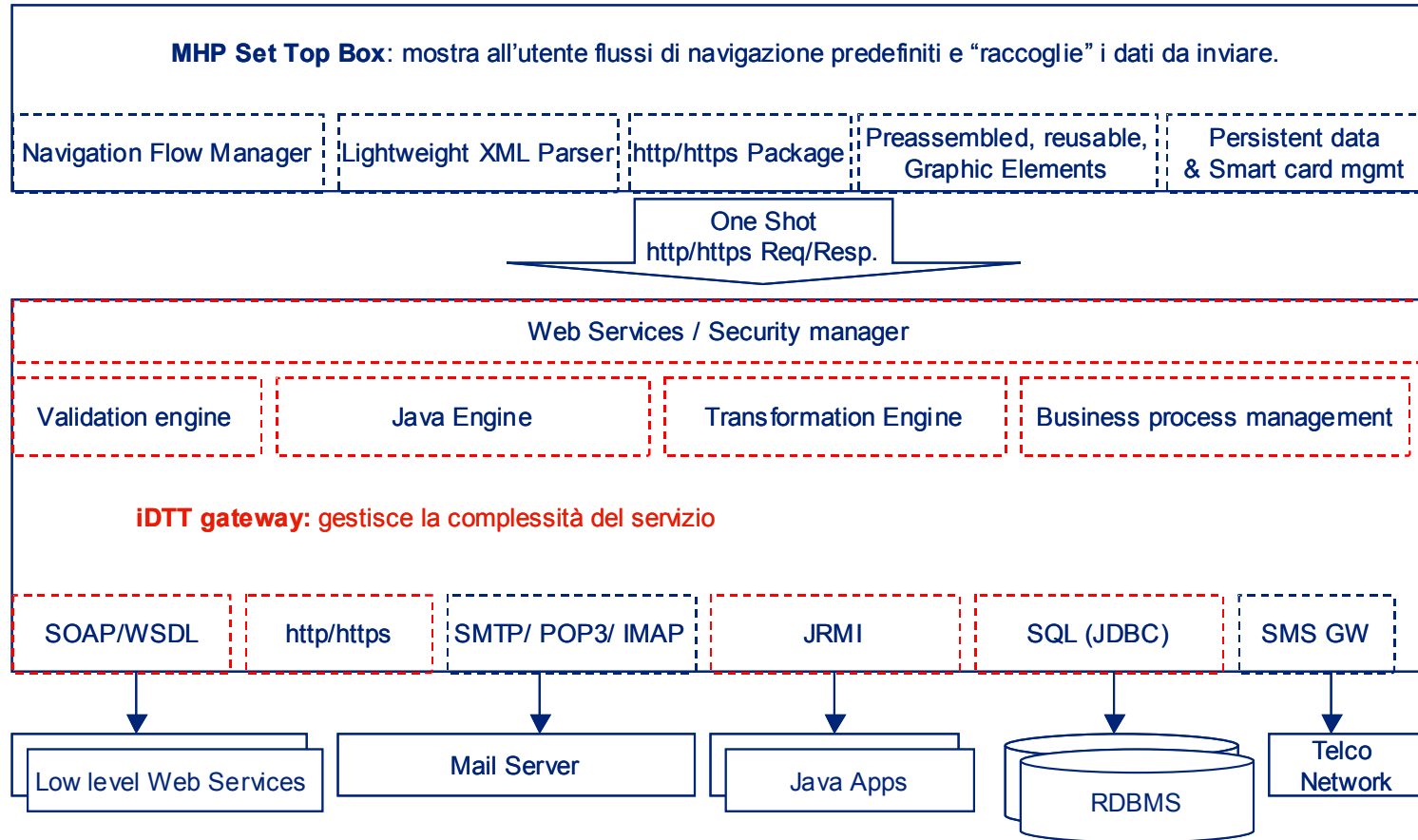


Altri aspetti di un Centro Servizi





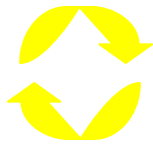
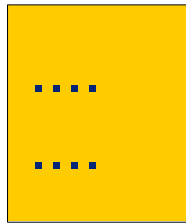
Interazione STB – iDTT gateway



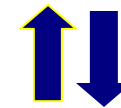
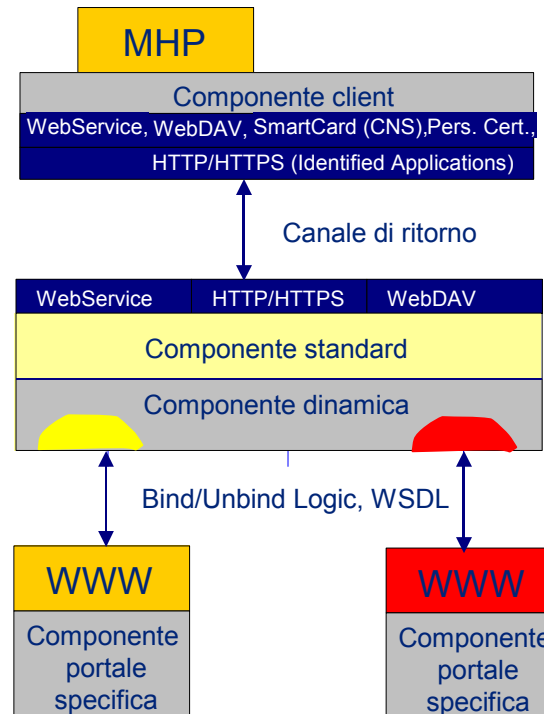
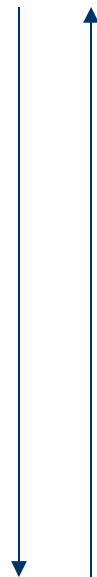


iDTT gateway

Inoltro informazioni di
sessione + applicative



Transazione
end-2-end

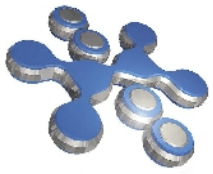


iDTT gateway

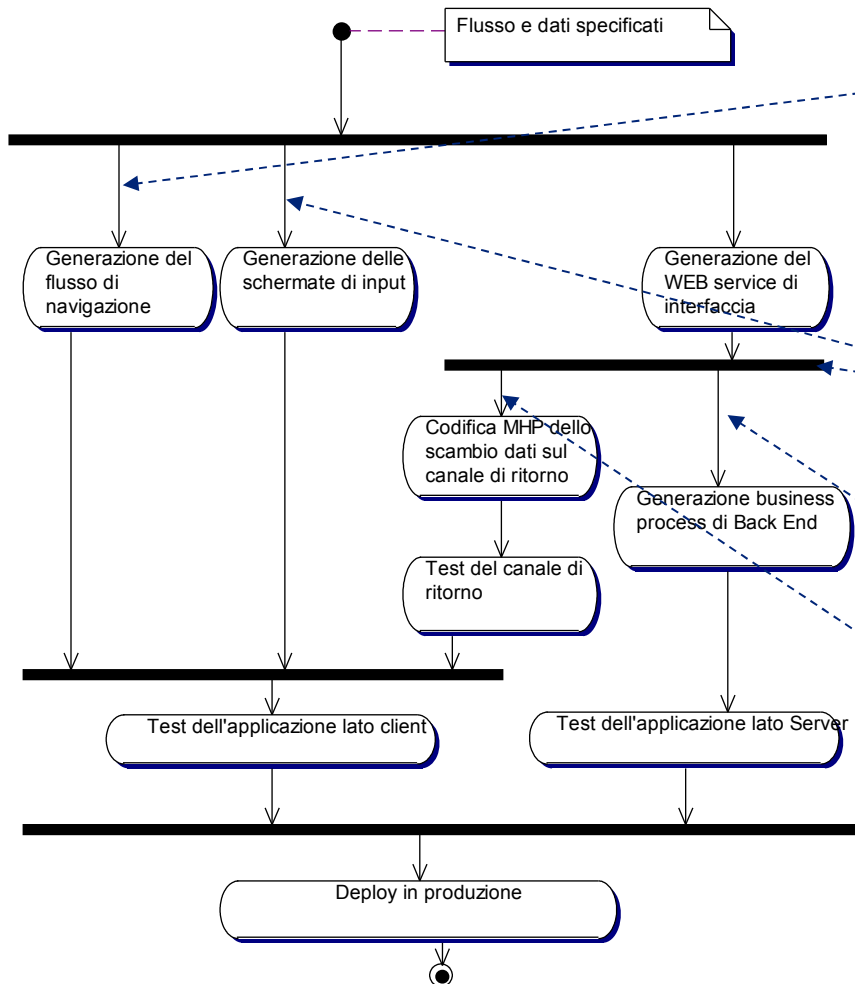


> complessita' >





Standard, Web Services e Choreography

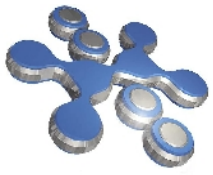


XML con grammatica (schema xsd) condivisi tra Service designer e app creator. Non esiste uno standard W3C. La grammatica DEVE essere autoconsistente.

W3C XSD che contiene la definizione della grammatica dello scambio dati tipico del servizio. Lo STESSO XSD viene usato run time per la validazione dei dati di input

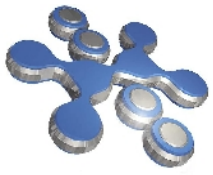
W3C WSDL (Web Service Definition Language)

Framework di classi Java che implementano il protocollo di basso/medio livello



Identificazione utente STB

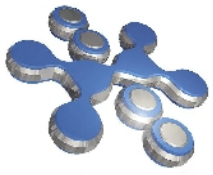
- Identificazione automatica
 - [Dispositivo Bluetooth]
 - PIN (EMV Standard, adatto ai sistemi transattivi con pagamento)
 - Smart card + PIN
 - File dati personali
 - [Dati letti dal certificato X.509]
 - Login
 - Matricola/Pin
 - Username/Password



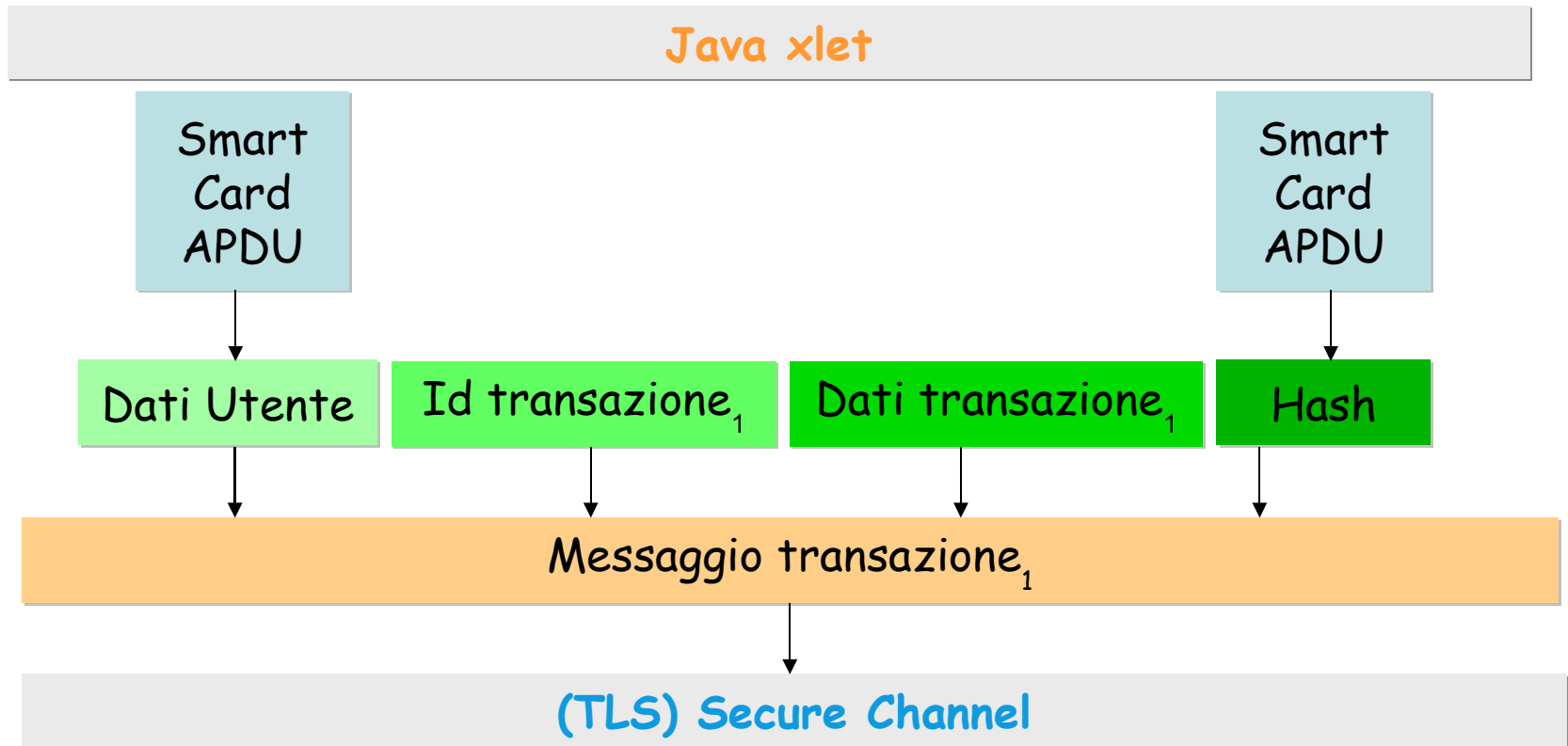
Identificazione utente STB

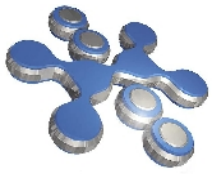


- Identificazione automatica
 - [Dispositivo Bluetooth]
 - PIN
 - Smart card
 - [PIN]
 - Login
 - Matricola/Pin
 - Username/Password

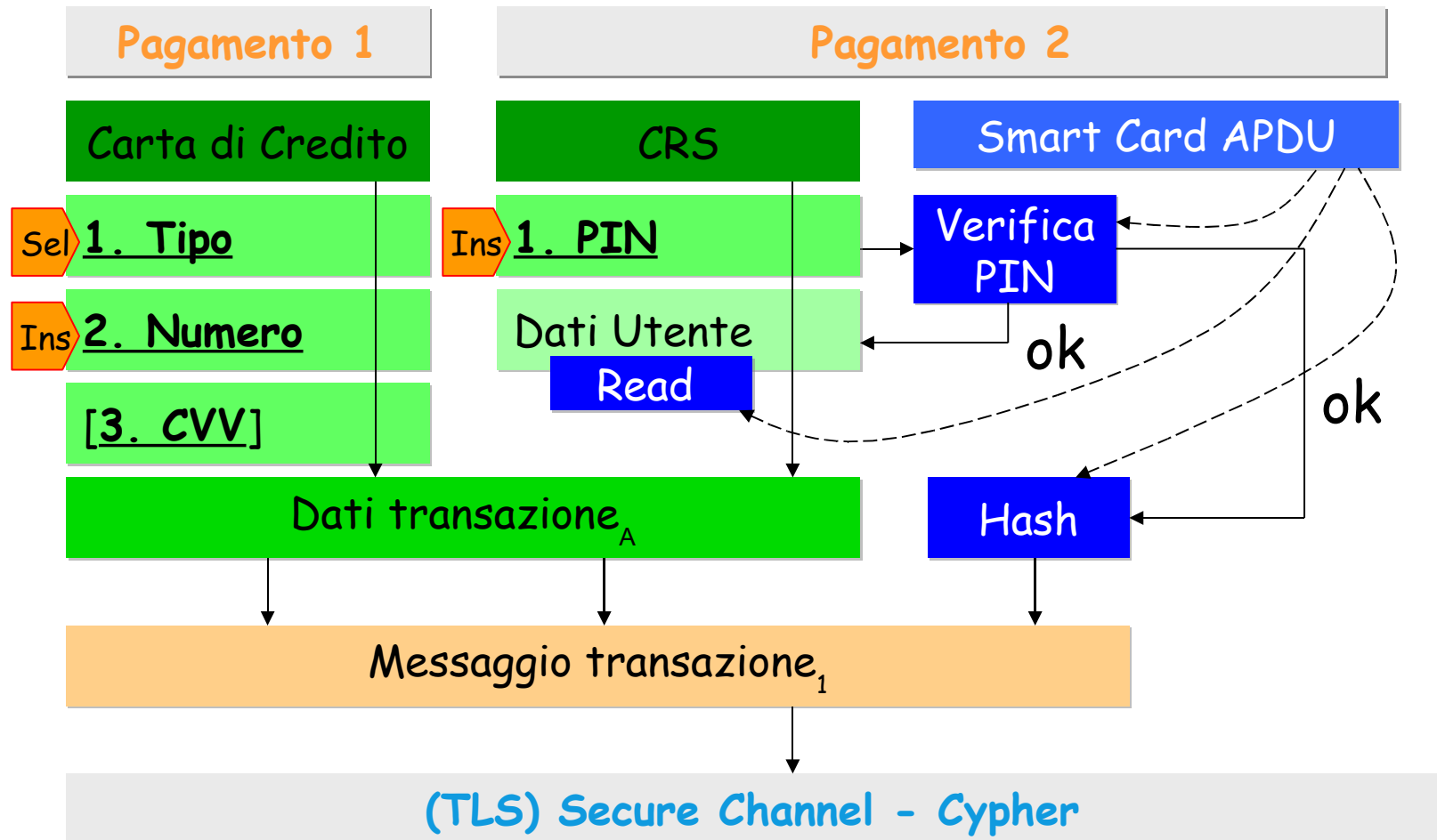


Composizione dati dispositivi (1)



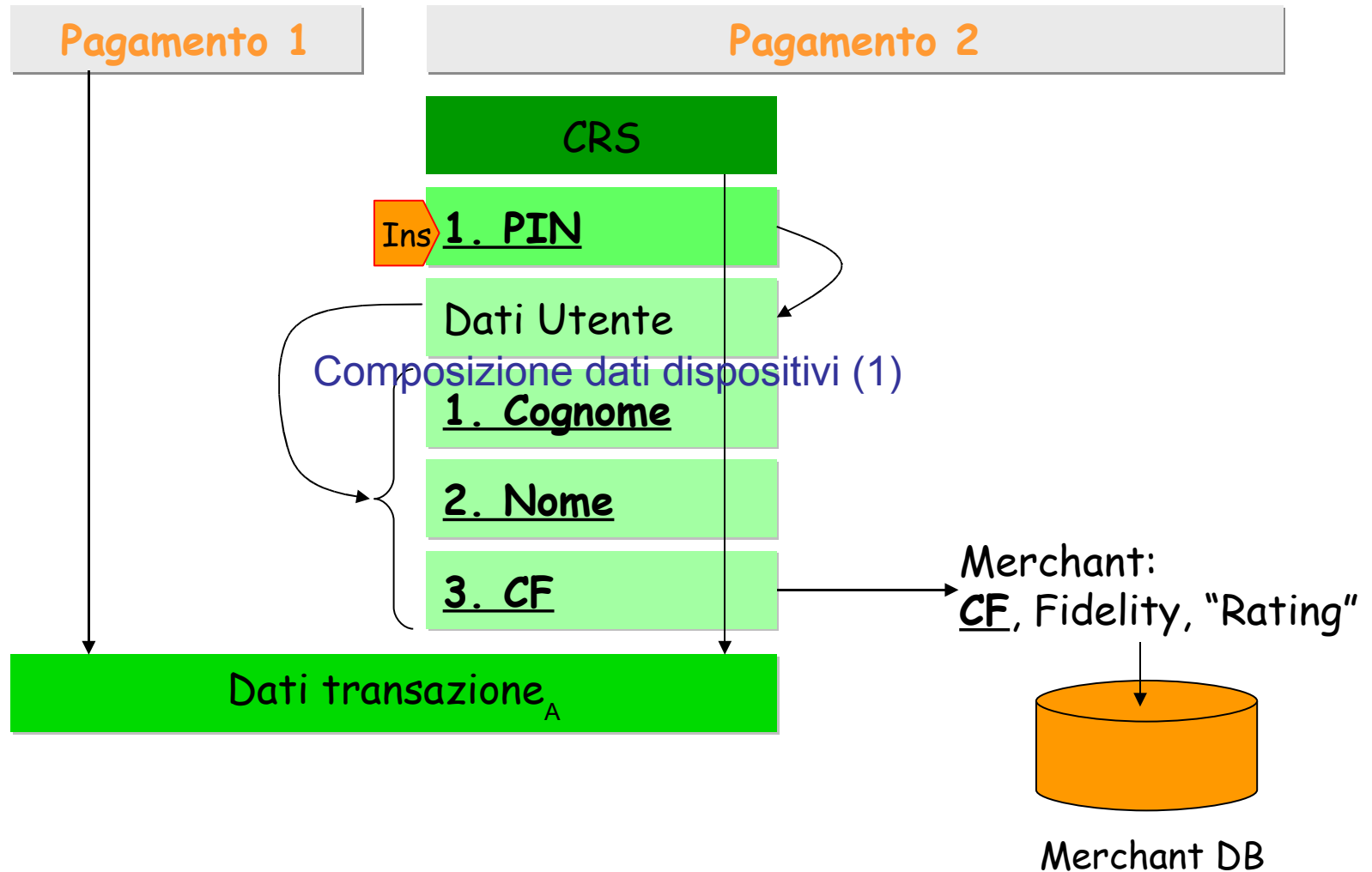


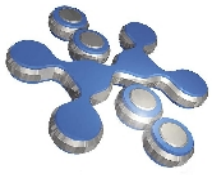
Composizione dati dispositivi (2)



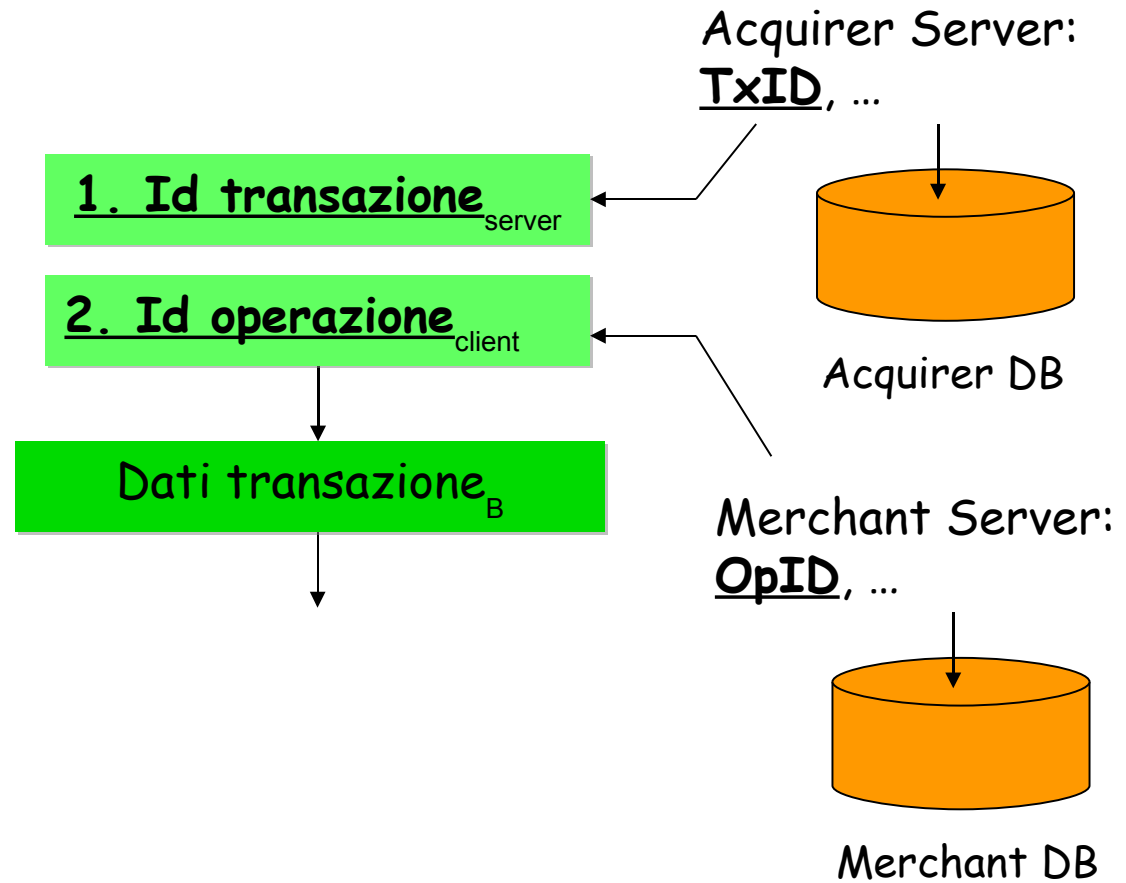


Composizione dati dispositivi (3)



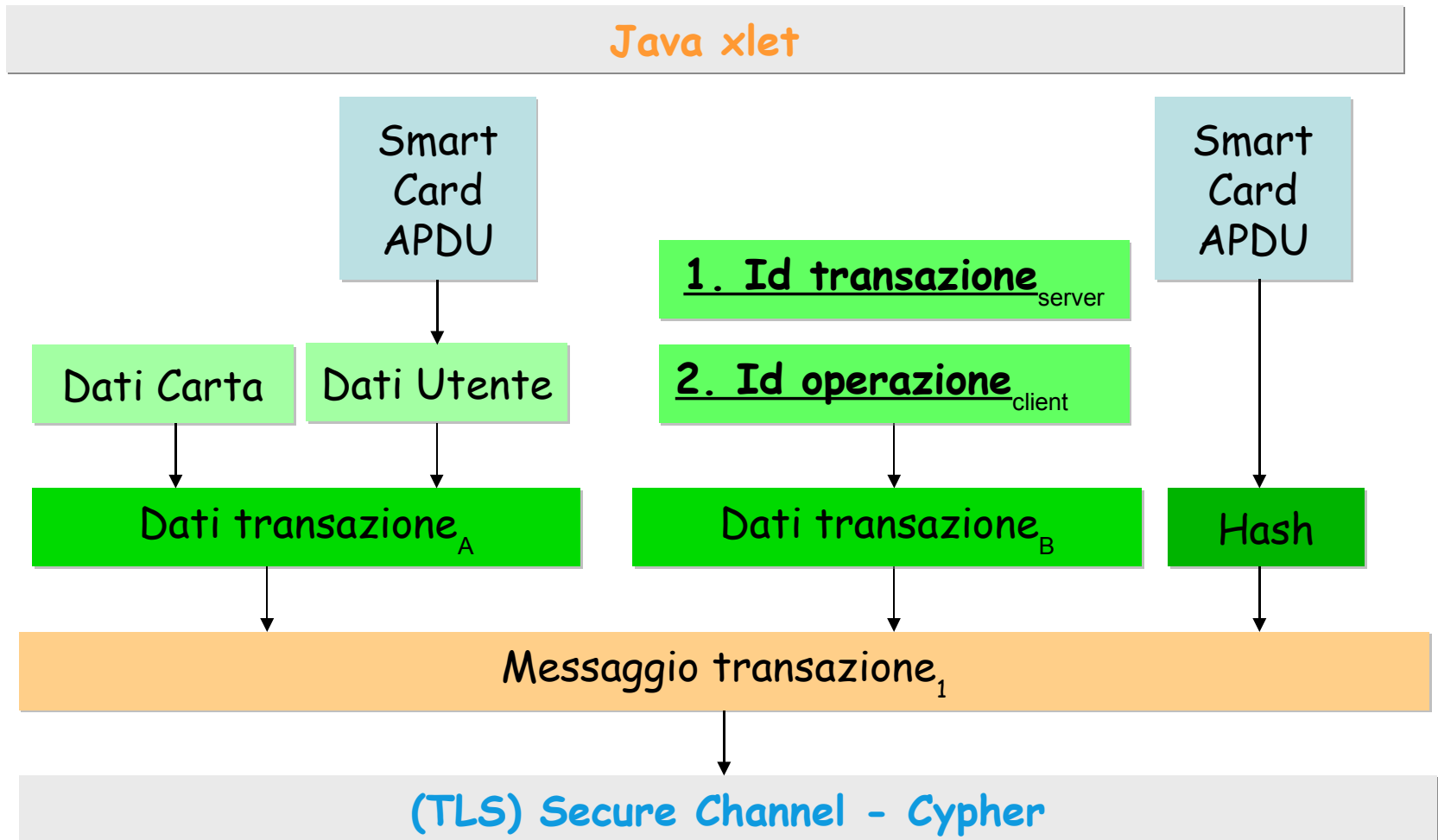


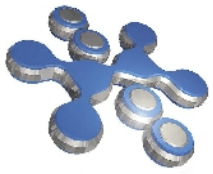
Composizione dati di ritorno (3)



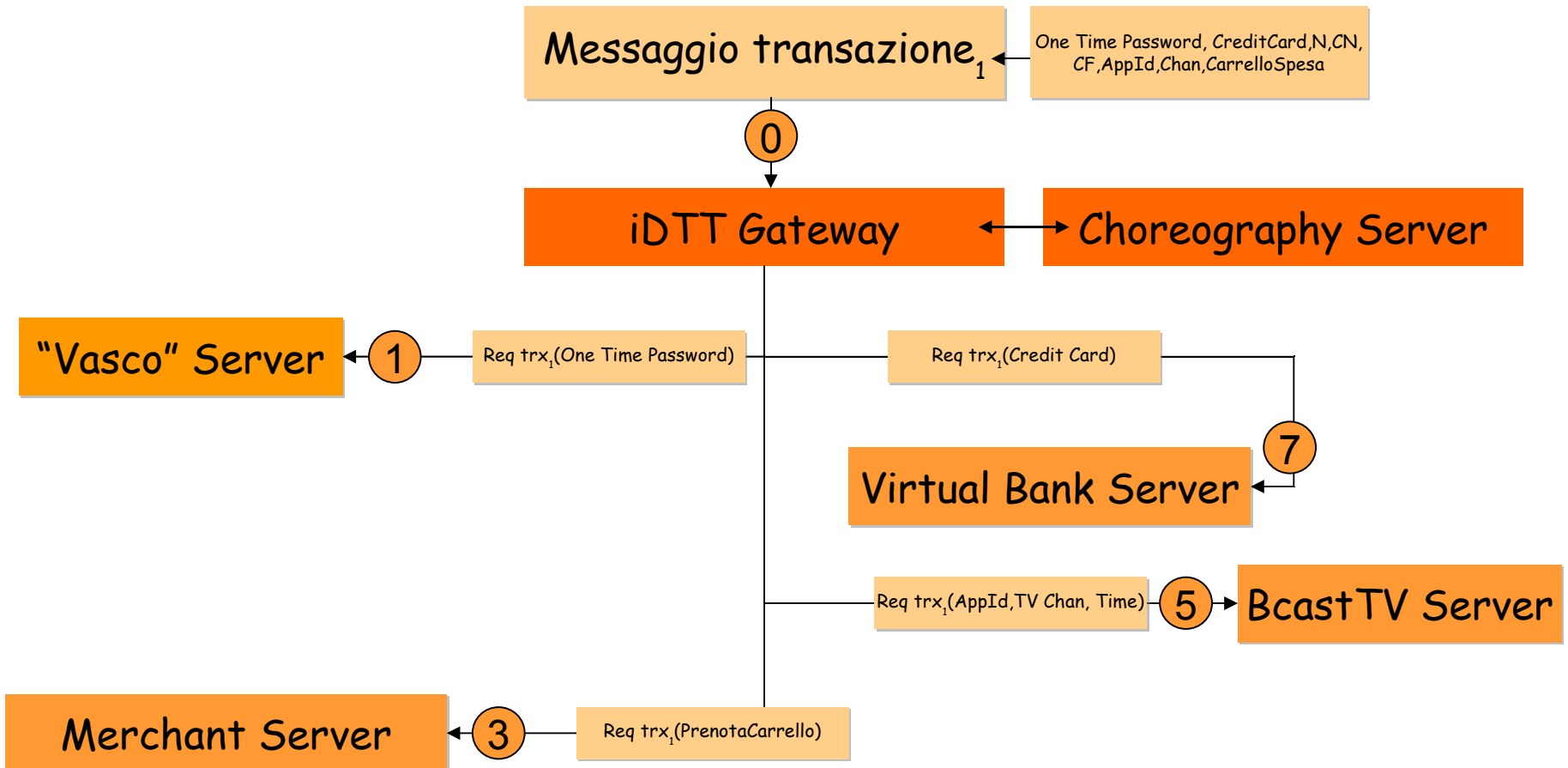


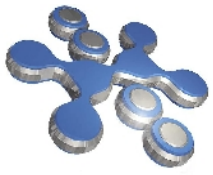
Composizione dati dispositivi (4)



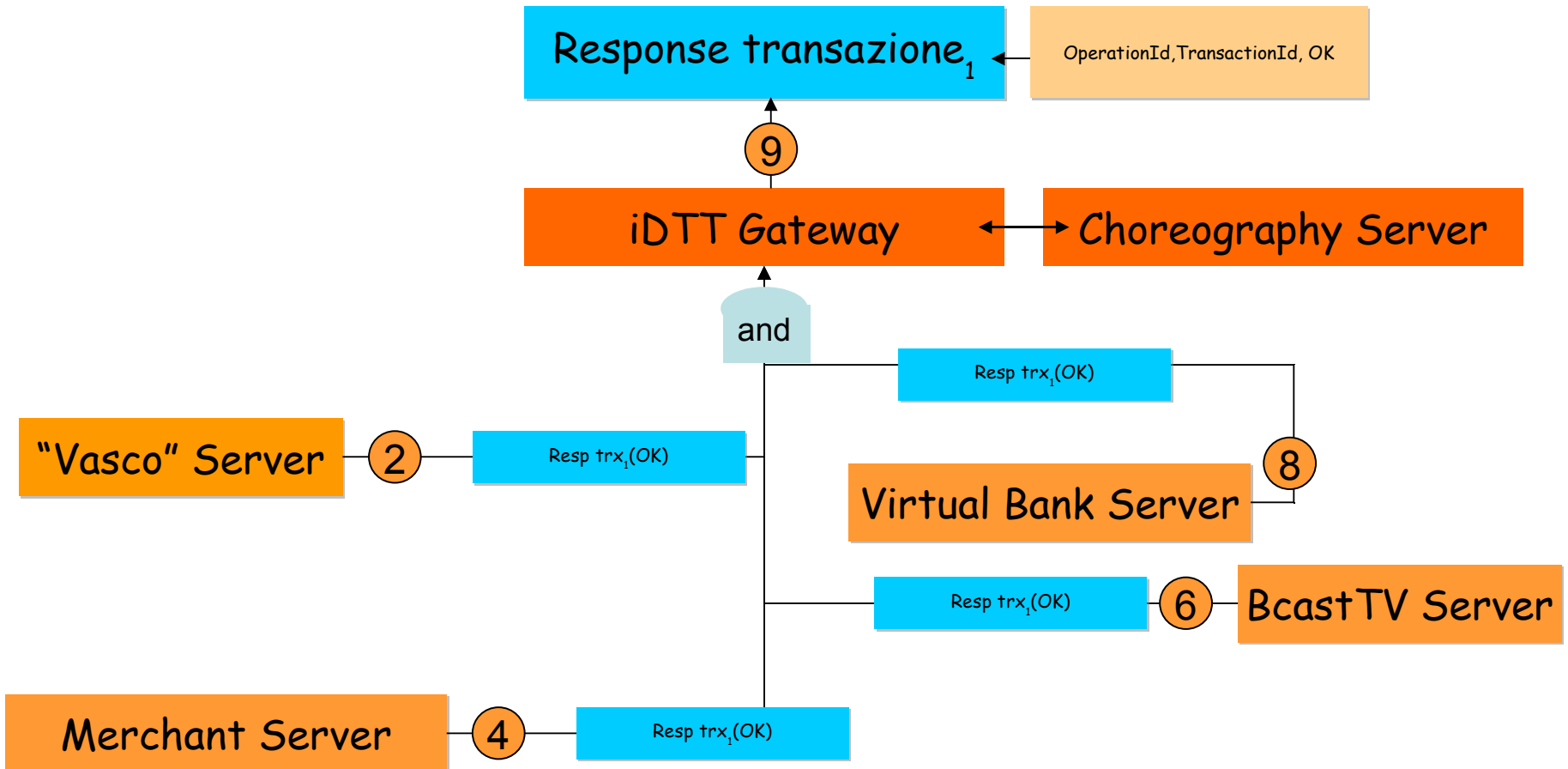


Request STB → iDTT



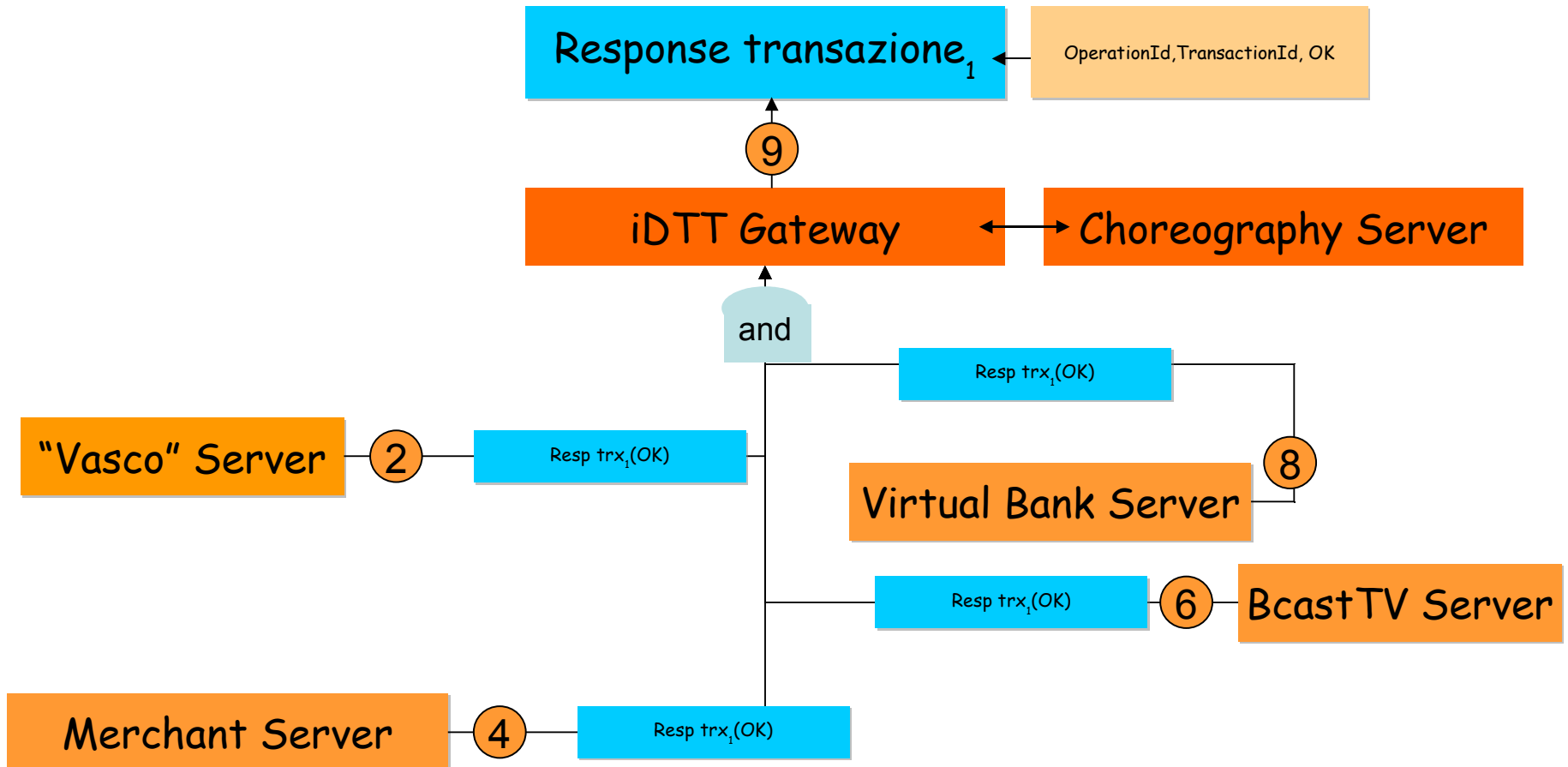


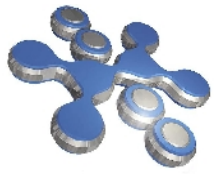
Response iDTT → STB, ok



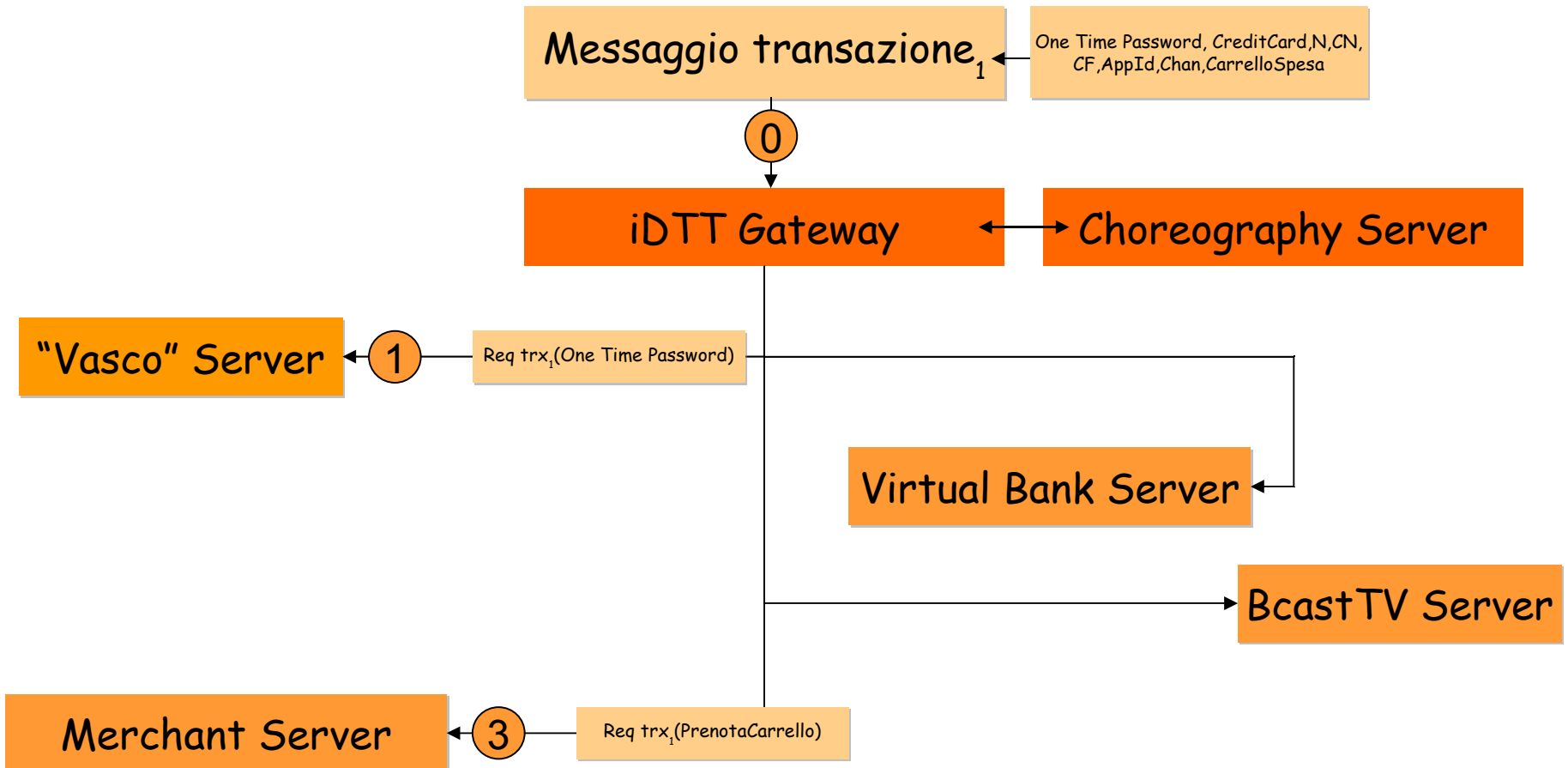


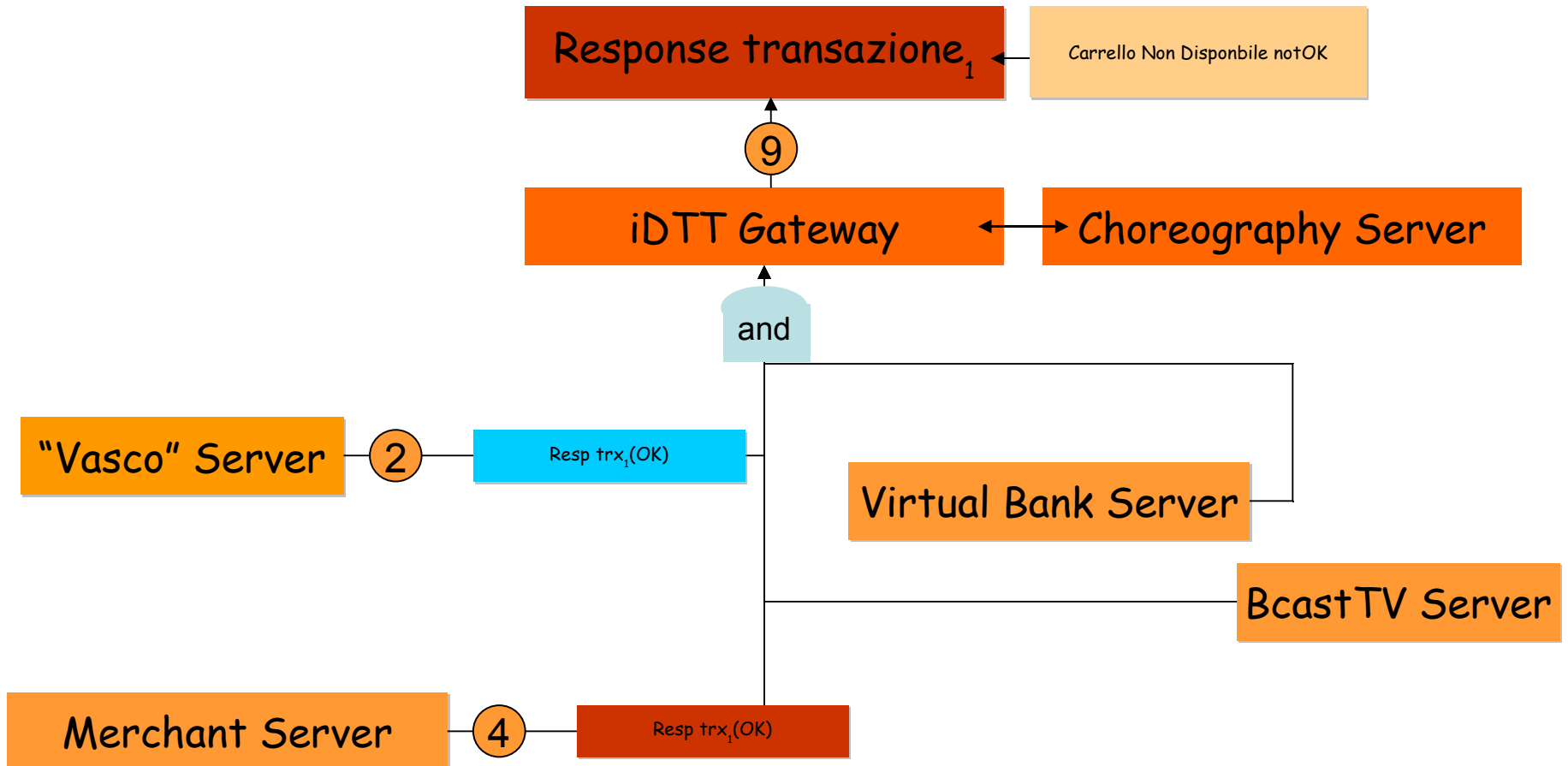
Richieste verso server(s) soddisfatte





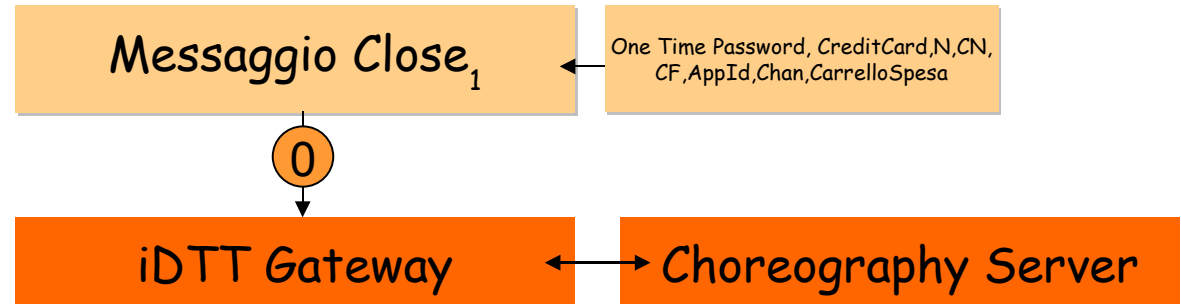
Richieste verso Merchant non soddisfatte

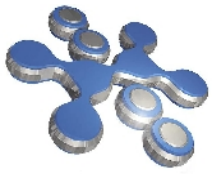




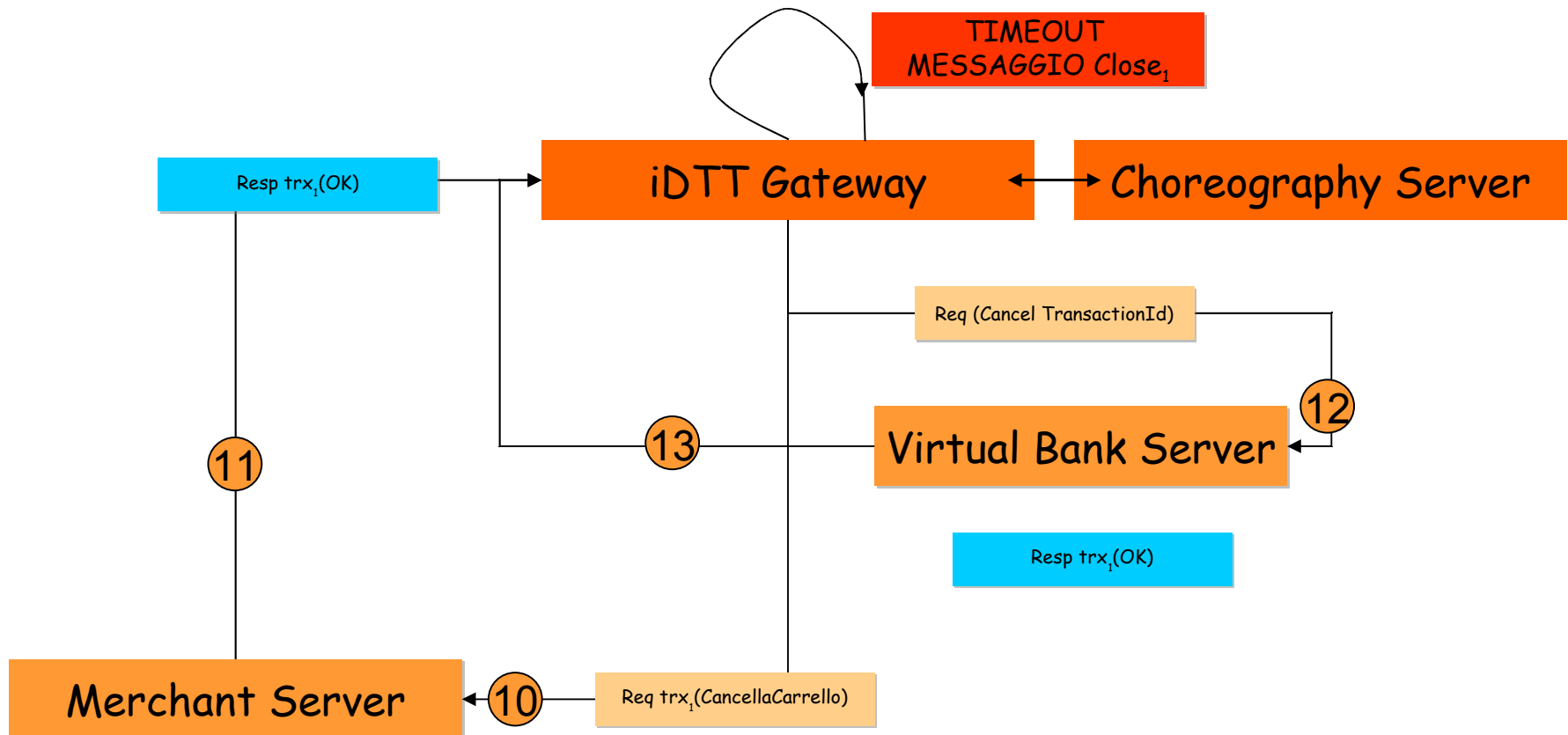


Transazione chiusa [ok] STB→iDTT





Transazione non chiusa STB→iDTT





Messaggio informativo STB→iDTT

