Slide 1

Why didn’t the AWS announce a blockchain service last year at reinvents and even though they have a lot of customers who run Blockchain services on top of AWS.

1. The reason was they were in talking to customers and
2. they just hadn't seen that many Blockchain examples in production or they couldn't pretty easily be solved by a database

Amazon genuinely didn't understand what the real customer unit is.

So Amazon spent the last part of 2017 and the first half of 2018 talking to hundreds of customers about what is it that they really want when you say you like the idea of Blockchain and

What Amazon found was that there were two jobs they were trying to solve but they were each a little bit different

Slide 2

1st

The first was that they had a significant number of customers who effectively wanted a ledger with a centralized trusted entry but where that ledger served as a transparent immutable cryptographically verifiable transaction log for all the parties that they needed to deal with and if you think about this is something that a lot of companies need

2nd

and then the second problem we heard customers wanting to solve was a little bit different these were typically peer organizations that wanted to do business together and where they didn't want any centralized trusted entity they wanted to have complete decentralized trust and so all those transactions and interactions everybody would see and everybody would get to approve by consensus before they happen and again this was an interesting problem most of them are trying to solve this by using these blockchain framework.

Slide 3

What is Amazon Quantum Ledger Database?

Amazon Quantum Ledger Database (QLDB) is a purpose-built ledger database that provides a complete and cryptographically verifiable history of all changes made to our application data.

So how is a ledger database different from other databases?

Traditional databases allow you to overwrite or delete data, so developers use techniques such as audit tables and audit trails to help track data lineage. While these approaches can work, they require custom development, can be difficult to scale,

Data in Amazon QLDB is written to an append-only journal, providing the developer with full data lineage. Moreover, data in Amazon QLDB's journal is immutable and verifiable, meaning you can trust the data in your ledger.

What data should I store in a ledger database?

In the supply chain and logistics space movement between carriers and across borders data

In finance, system-of-record applications track critical data, such as credit and debit transactions.

Instead of building complex record keeping functionality within their application, banks can use QLDB to easily store a permanent and complete record of all financial transactions.

 Is Amazon Quantum Ledger Database a distributed ledger or blockchain service?

Amazon QLDB is not a blockchain or distributed ledger technology.

Blockchain and distributed ledger technologies focus on solving the problem of decentralized applications involving multiple parties where there can be no single entity that owns the application, and the parties do not necessarily trust each other fully.

 If your application requires a complete and verifiable history of all application data changes, but does not involve multiple, untrusted parties, Amazon QLDB is a great fit.

QLDB is also fully managed and automatically scales to meet the needs of your application.

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**Immutable**

Amazon QLDB uses a journal that tracks each application data change.  Data on the journal cannot be deleted or modified. The full history of your database can be accessed

**Cryptographically Verifiable**

QLDB uses a cryptographic hash function (SHA-256) .

**Highly Scalable**

Blockchain frameworks are decentralized so to execute a transaction, they require a majority of members of the network to reach consensus on the validity of the transaction. On the other hand, QLDB has a centralized design, allowing its transactions to execute without the need for multi-party consensus.

**Easy to Use**

QLDB’s SQL-like API allows you to query, manage and update your data using SQL operators.

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Here is the diagram which shows how data is being stored in QLDB.

Slide 7

What is Amazon Managed Blockchain?

Amazon Managed Blockchain is a fully managed service that makes it easy to create and manage scalable blockchain networks using the popular open source frameworks Hyperledger Fabric and Ethereum

 Managed Blockchain allows you to set up and manage a scalable blockchain network with just a few clicks.

Managed Blockchain eliminates the overhead required to create the network, and automatically scales to meet the demands of thousands of applications running millions of transactions.

Once your network is up and running, Managed Blockchain makes it easy to manage and maintain your blockchain network.

* It manages your certificates,
* lets you easily invite new members to join the network, and
* tracks operational metrics such as usage of compute, memory, and storage resources.

What can I do with Amazon Managed Blockchain?

With Amazon Managed Blockchain, you can easily create Blockchain networks across multiple AWS accounts with the open source frameworks, Hyperledger Fabric and Ethereum.

These blockchain frameworks enable network members to securely transact and share data on a distributed and immutable ledger.

How do I get started with Amazon Managed Blockchain?

To get started with Amazon Managed Blockchain, first sign-up for the preview [here](https://pages.awscloud.com/AmazonManagedBlockchain-preview.html). You will be notified by email once your AWS account has been included in the Amazon Managed Blockchain preview. After you are notified, go to the Amazon Managed Blockchain console and click “Create blockchain network.”

What are the service limits associated with Amazon Managed Blockchain?

In the Amazon Managed Blockchain preview, you are limited to participating in a single Hyperledger Fabric network with up to 6 channels. In that network, you can create up to 3 members, and you can create a single peer node for each member.

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**Choice of Hyperledger Fabric or Ethereum**

Hyperledger Fabric is well-suited for applications that require stringent privacy and permission controls with a known set of members, for example, a financial application where certain trade-related data is only shared with select banks. Ethereum is well suited for highly distributed blockchain networks where transparency of data for all members is important, for example, a customer loyalty blockchain network

**Scalable and Secure**

Amazon Managed Blockchain can easily scale your blockchain network as the usage of applications on the network grows over time. When a network member requires additional capacity for creating and validating transactions, the member can quickly add a new peer node using Managed Blockchain's APIs.

Managed Blockchain secures your network’s certificates with AWS Key Management Service (KMS), eliminating the need for you to set up your own secure key storage.

**Fully managed**

Unlike self-hosting your blockchain infrastructure, Amazon Managed Blockchain eliminates the need for manually provisioning hardware, configuring software, and setting up networking and security components.

**Easily Analyze Blockchain Activity**

Amazon Managed Blockchain can replicate network activity to Amazon QLDB, a fully managed ledger database.

This eliminates the need for custom development to extract blockchain network activity data for analysis and optimization. Once data is stored in QLDB, you can query it and gain advanced insights,