

Web3 Technologies and Network as a Service



Global NaaS Event
By MEF



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October 2023

Web3 technologies **and Network as a Service**

A production use case example of a Web3 company and the
Console Connect Software Defined Interconnection Platform



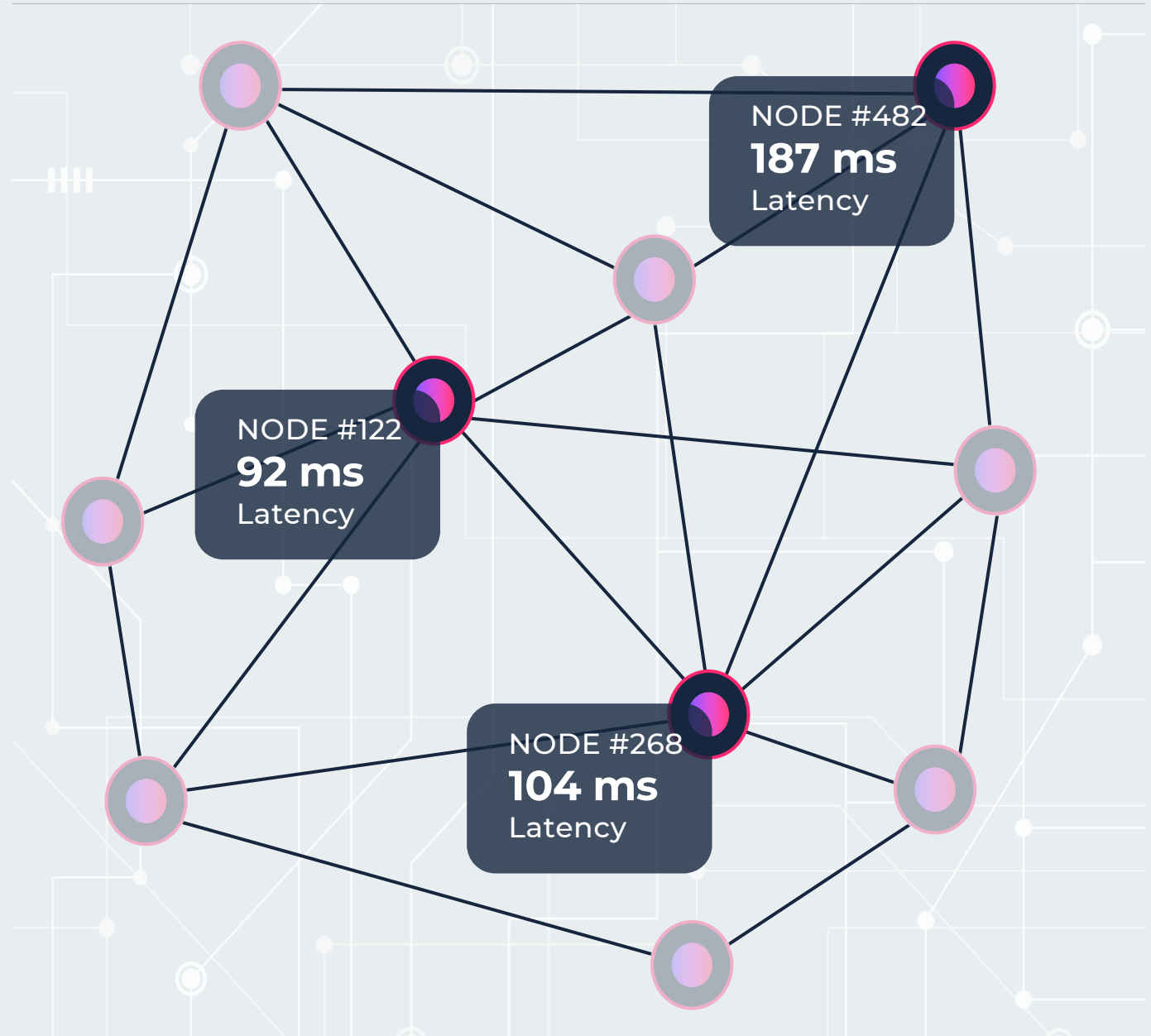
“Syntropy is building a multi-chain data availability layer, providing a decentralized and scalable way to access, retrieve and interact with **real-time and historical on-chain data**—

Syntropy

DARP nodes

DARP nodes constantly share latency information and other metrics in between each other, creating a global intelligence layer for Internet pathways.

- DARP Connectivity – for route optimization
- SDN Connectivity – for network traffic
- Improved network latency
- Reduced packet loss
- Edge Compute - Utilizing Console Connect's programmable core network



Routed latency

Public latency

Relay latency

FILTERS



0ms > 200ms

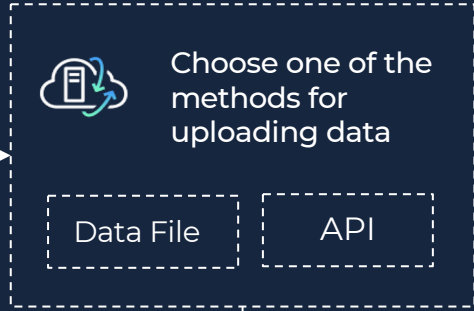
100%

Smart Contract Swimlane Diagram

Parties

Create Smart Contract

Execute Smart Contract



Finished

Blockchain



Settlement Rules via Smart Contract

Stargate Dashboard Monitoring Proposal Validation Invoice Syntropy Network Limited

Proposals / SDN&Darp-PCCW-Syntropy

SDN&Darp-PCCW-Syntropy Draft Comment Logs

Initiator: Syntropy Network Limited | Partner: pccwglobal | Created Time: 2023-07-25 09:39:18

Primary Key

2 Fields Import Add New Field

Field Name	Field Type	Data Sample
calDay <small>Max 16 characters</small>	Date YYYY-MM-DD	2023-07-08
DataCenter <small>Max 16 characters</small>	String 64 <small>Please enter the length of the string</small>	Enter a data sample

Comparative Data

2 Fields Import Add New Field

Field Name	Field Type	Validation Rules	Data Sample
SDNUsage <small>Max 16 characters</small>	Numeral 0 <small>Max 8 decimal places</small>	10%Allowed	901141945
DarpUsage <small>Max 16 characters</small>	Numeral 0 <small>Max 8 decimal places</small>	Initiator's Accepted	Enter a data sample

Cancel Additional Settings Save and Continue

Smart Contract Proposal Generation Settlement rules can be defined in the UI between two (2) companies which translate into a smart contract. The smart contract gets executed at the end of the billing cycle with an invoice generated from the matching data submitted between the (2) companies. The outstanding items goes through a manual dispute process via the UI.

Partnership use case

Settlement Rules Explained

Matching Rules

- Date
- DataCenter (Location)

Data Handling

- Traffic from SDN:
 - Accept exact match and 10% difference
- Traffic from DARP:
 - Accept all

Syntropy-PCCW Approved

Initiator: PCCW GLOBAL | Partner: SYNTROPY NETWORK LIMITED | Created Time: 2023-09-18 09:32:04 | On-Chain ID: -- + Create Validation

Description: Monthly settlement

Validations 1 Comment Logs

Primary Key and Comparative Data

Primary Key

Field Name	Field Type	Data Sample
cal_day	Date Format:(YYYY-MM-DD)	
server_name	String Format:(Max length: 64)	

Comparative Data

Field Name	Field Type	Validation Rules	Data Sample
SDN_usage	Numeral Format:(2 decimal)	Rule: INITIATOR's data will be auto-accepted if 10% difference based on INITIATOR data.	
Darp_usage	Numeral Format:(2 decimal)	Rule: Automatically accept the data value uploaded from the INITIATOR	

Additional Settings

- 1 **Data Upload Process**
 - └ The validity period of the validation initiated through this proposal is **365** day(s). After the validation expires, data cannot be uploaded. If one party has already completed the data upload, the data will be considered **Invalid**
- 2 **Periodic Validation**
 - └ Initiate the validation manually
- 3 **Dispute Expiration Setting**
 - └ Allow unresolved disputes moves to future **1000** week(s). Unresolved disputes will be accept data from **Initiator** after the deadline.

Partnership use case

Smart Contract - Deep Dive

- Data Aggregation
- Data Comparison

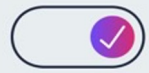
- Data Handling via the Settlement Rules Defined

```

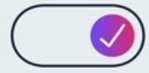
1 DataMatch (ContractId initiatorDataId, ContractId partnerDataId, ContractId agreementId)
2   let initiatorOriginalData = Fetch(initiatorDataId)
3     partnerOriginalData = Fetch(partnerDataId)
4     agreement = Fetch(agreementId)
5     compareFields = agreement.compareFields
6     for(compareField: compareFields) {
7       let
8         initValue = initiatorOriginalField.value
9         partnerValue = partnerOriginalField.value
10        compareRule = compareField.compareRule
11        DataFieldCompare(initValue , partnerValue, compareRule)
12    }
13 DataFieldCompare(initValue , partnerValue, compareRule)
14   let basedOnValue = if (compareRule.accept == INITIATOR) then initValue else partnerValue
15   if (compareRule.rule == ABSOLUTE && abs(initValue - partnerValue) < compareRule.threshold) ||
16     (compareRule.rule == PERCENT && basedOnValue != 0.0 && abs((initValue - partnerValue)/basedOnValue)*100 < compareRule.threshold)
17   then do
18     let status = DisputeData.THRESHOLD_SAME
19     acceptData = if compareRule.accept == INITIATOR then initValue else partnerValue
20     create(status, acceptData)
21   else do
22     let status = DisputeData.PENDING_AGREEMENT
23     acceptData = None
24     create(status, acceptData)
25 Fetch(ContractId smartContractId)
26 return fromChain(smartContractId)

```

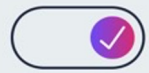
Integrate Console Connect NaaS services via API



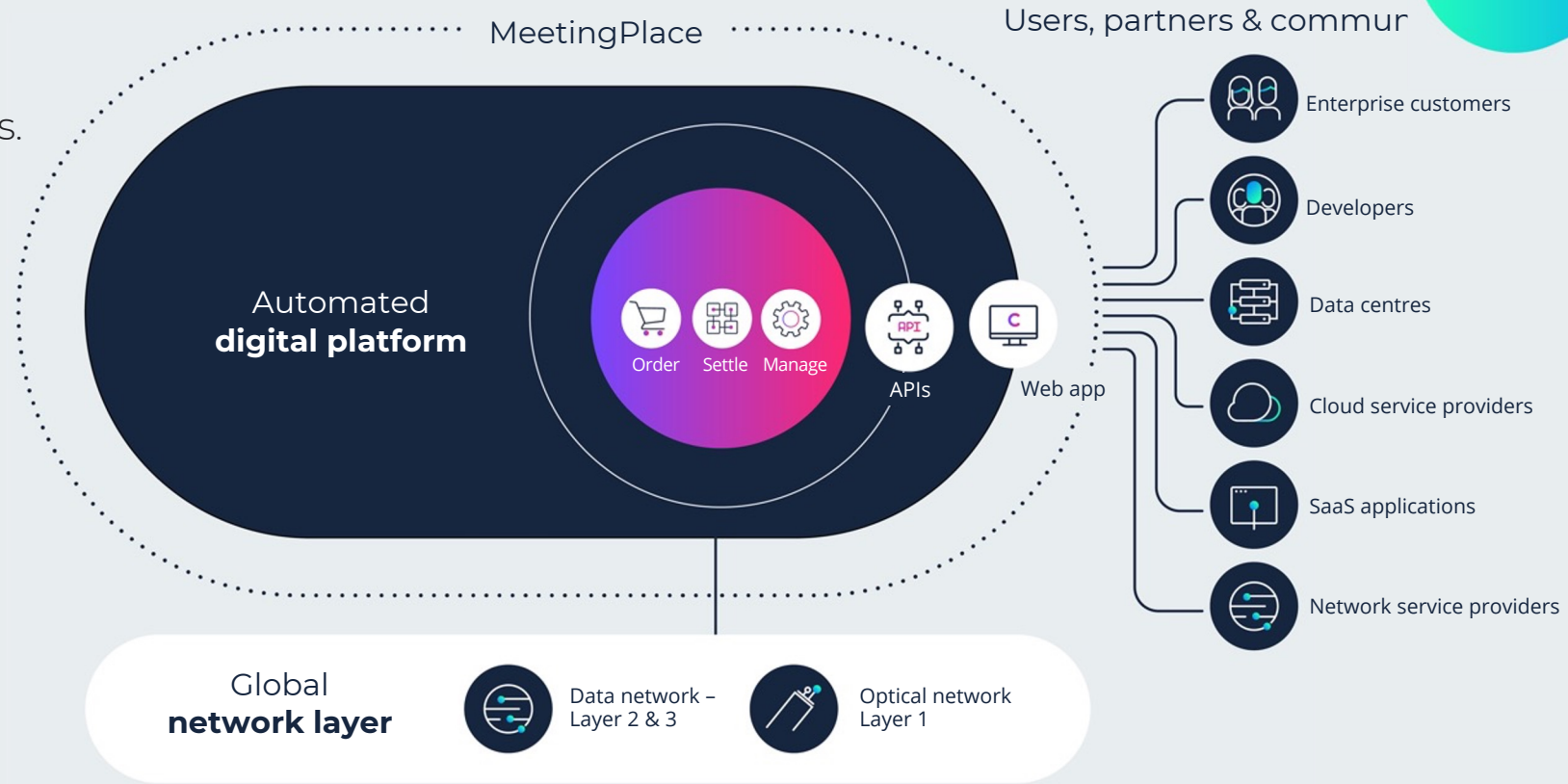
Console Connect NaaS APIs enable developers to automate network connectivity across different providers.



Our API ecosystem abstracts the complexity & rate of change in cloud provider API endpoints.



Hence, developers can deploy services more quickly via single points of access to the world's largest software-defined connectivity platform.



Thank you

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