SDDC

Hyper Converged and
Hyper Scale infrastructure

Impacts on DC concepts operations today and in the future

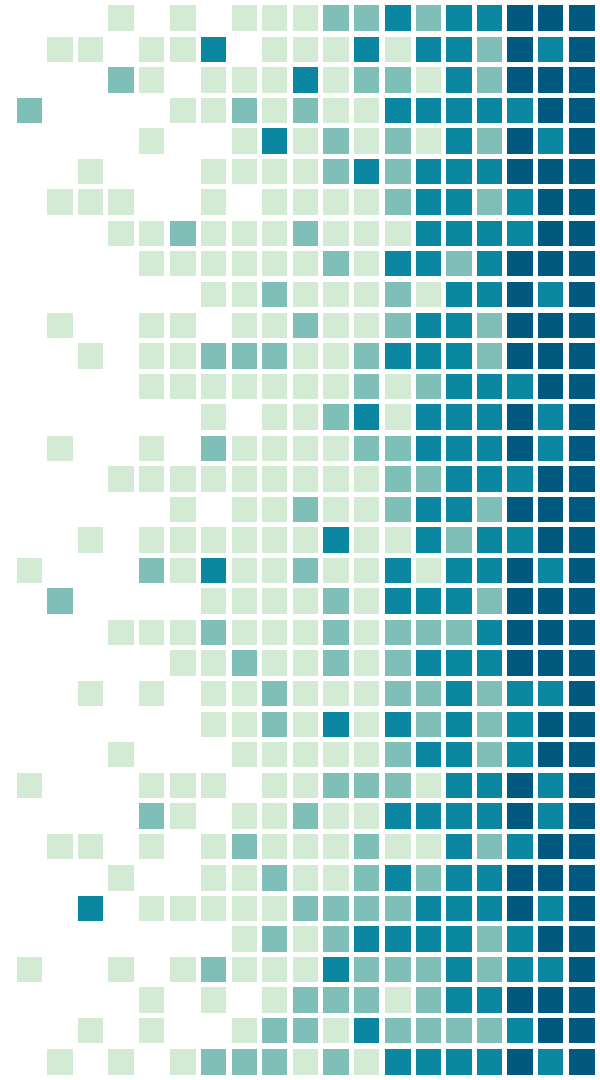François CONZA – 11 / 06 / 2018
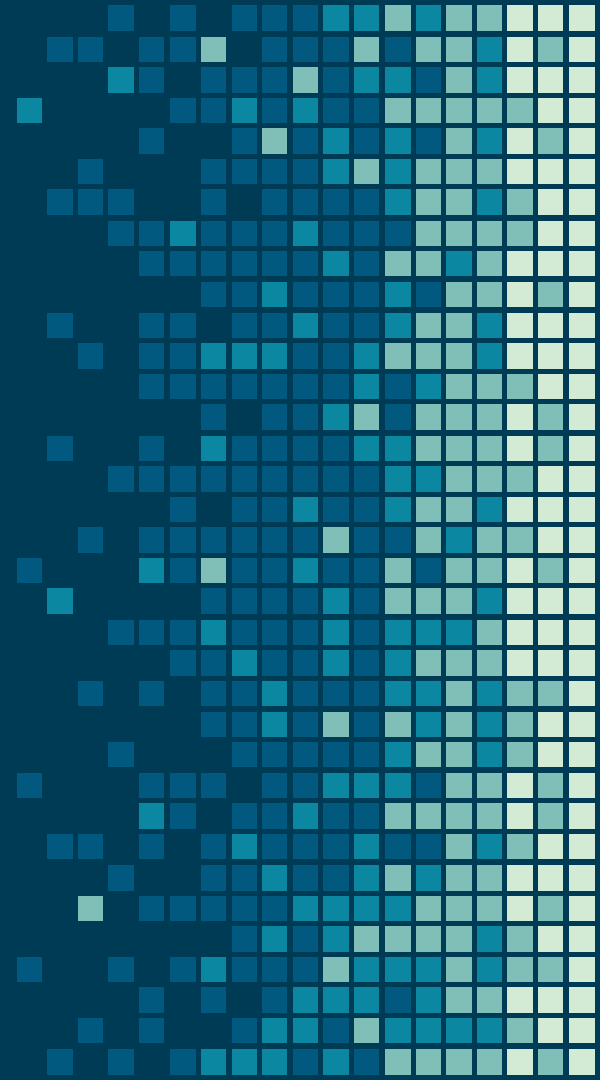
Agenda

- SDDC introduction

- Datacenter Infrastructures

- Hyperconvergence (HCI)

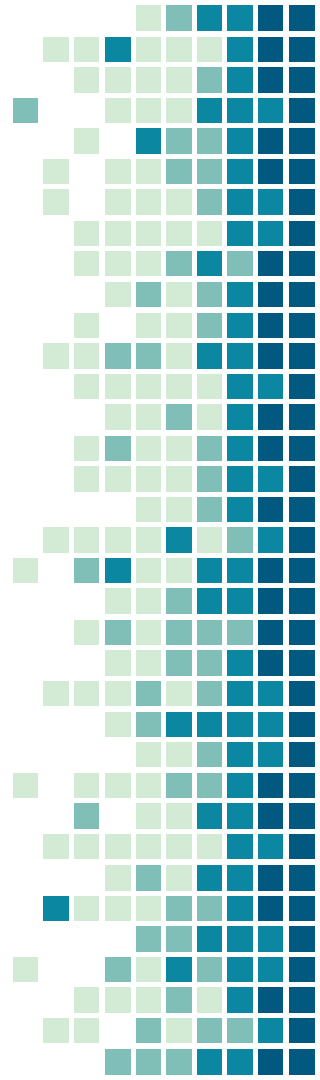- SDDC Impacts and benefits
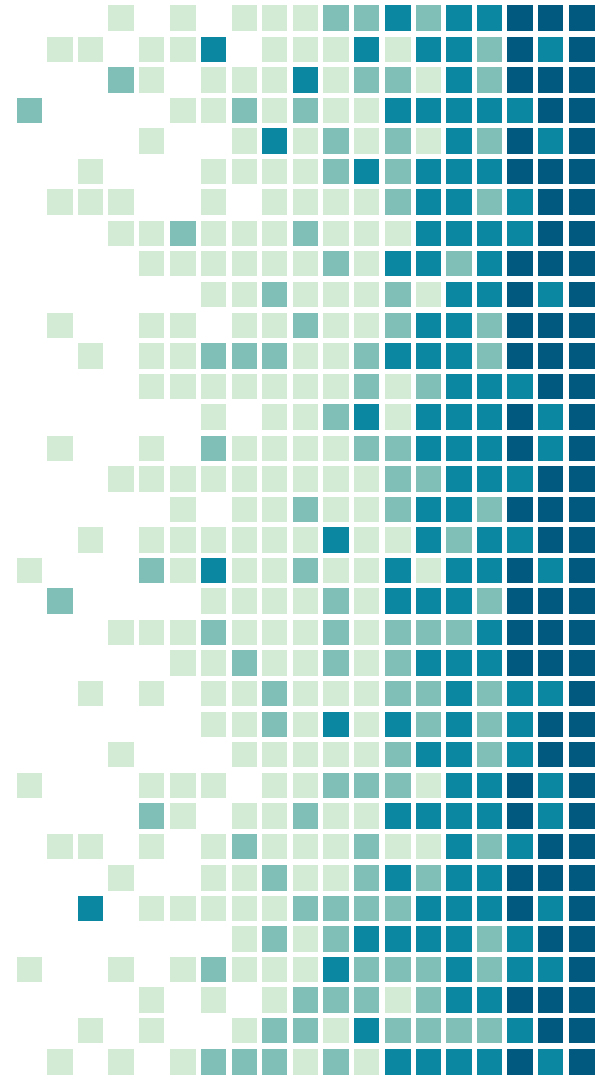
1.

SDDC

Software Defined DataCenter

" in an Software Defined DataCenter all infrastructure elements such as servers, storage, networking devices are virtualized and delivered as a service

SDDC Requirement

- **S**oftware **D**efined **S**torage
- **S**oftware **D**efined **N**etwork
- Compute Virtualization
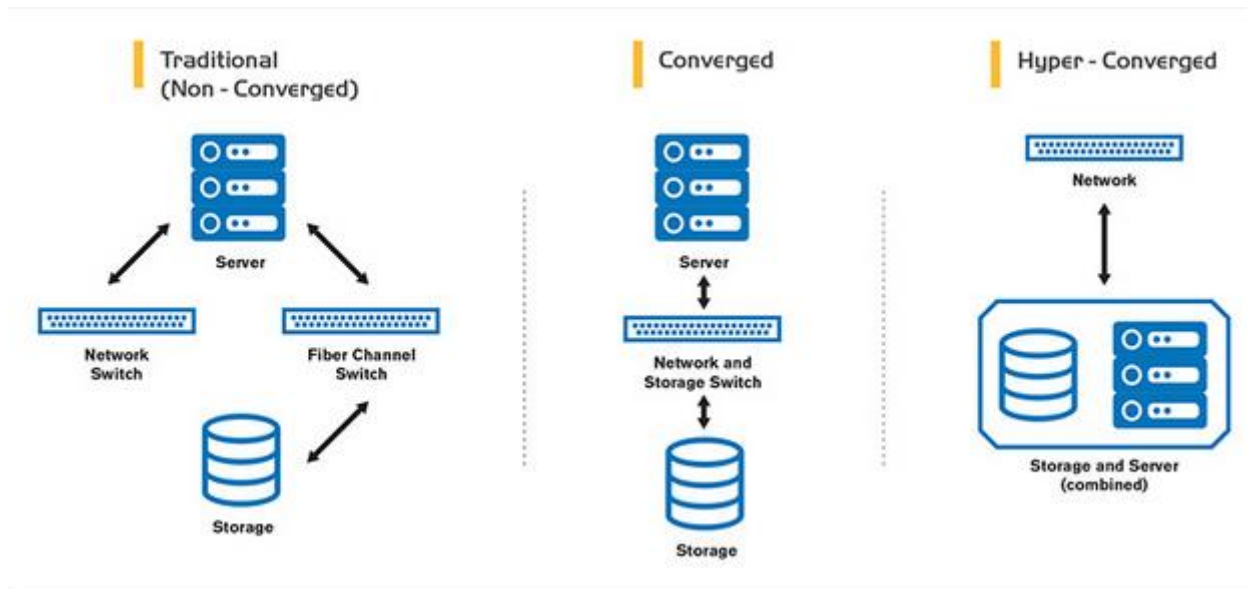- Automation
- Policy

5

2.

Datacenter Infrastructures

# Different DC Infrastructures

Quick overview of the differences between traditional datacenter, Converged and Hyper-Converged

Traditional DataCenter

- Silo organization
- Dedicated specialist per domain
- Time to provision can be very high when multiple team are imply
- Multiple Management Interface
- Waste of resources
- Difficult to maintain
- Poor flexibility
- Poor automation due to the number of technology/vendor

Sever Silo and Management
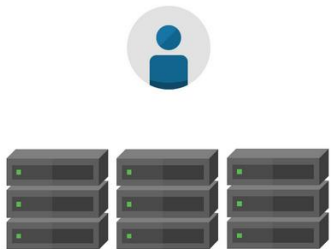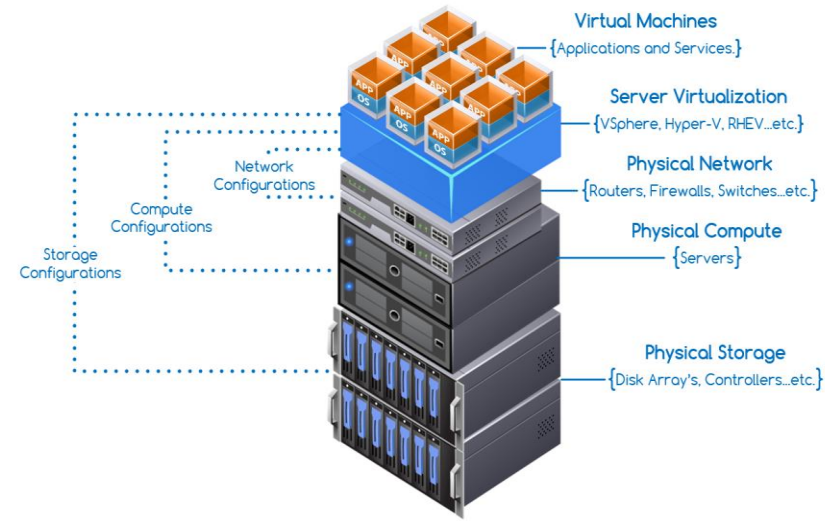
Storage Silo and Management
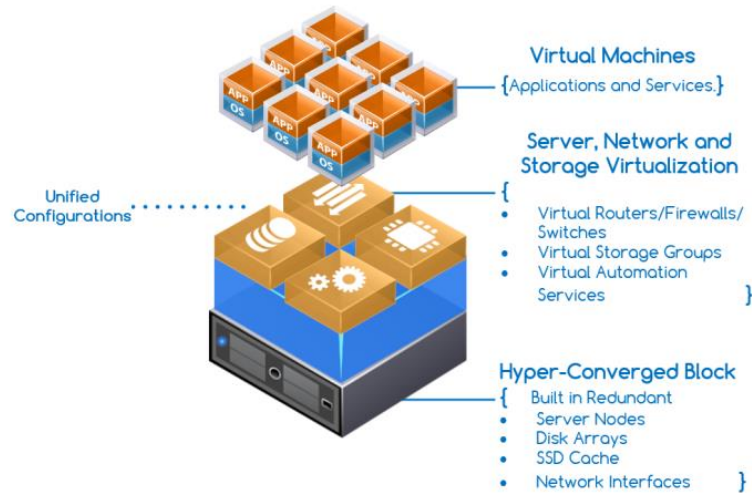
Networking Silo and Management

Security Silo and Management
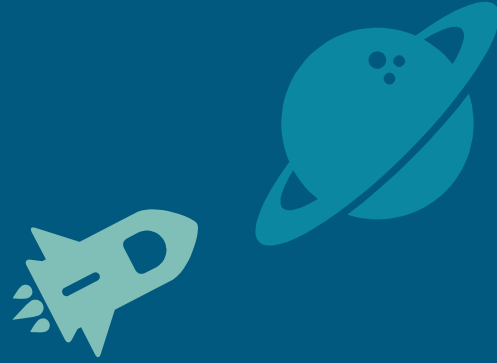
Converged & Hyperconverged

Converged

- Virtual Machines — {Applications and Services.}
- Server Virtualization — {VSphere, Hyper-V, RHEV...etc.}
- Physical Network — {Routers, Firewalls, Switches...etc.}
- Physical Compute — {Servers}
- Physical Storage — {Disk Array's, Controllers...etc.}

Network Configurations
Compute Configurations
Storage Configurations

HyperConverged

- Virtual Machines — {Applications and Services.}
- Server, Network and Storage Virtualization — {
  - Virtual Routers/Firewalls/Switches
  - Virtual Storage Groups
  - Virtual Automation Services }
- Hyper-Converged Block — {
  - Built in Redundant
  - Server Nodes
  - Disk Arrays
  - SSD Cache
  - Network Interfaces }

Unified Configurations

3.
Hyperconvergence

HCI, the easy path to SDDC

Hyperconverged Infrastructure Provide

Compute
Virtualization

Software
Defined
Storage

Software
Defined
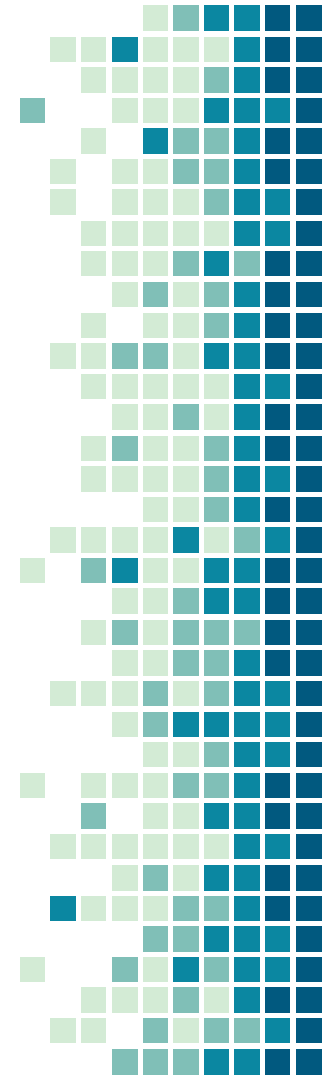**N**etwork
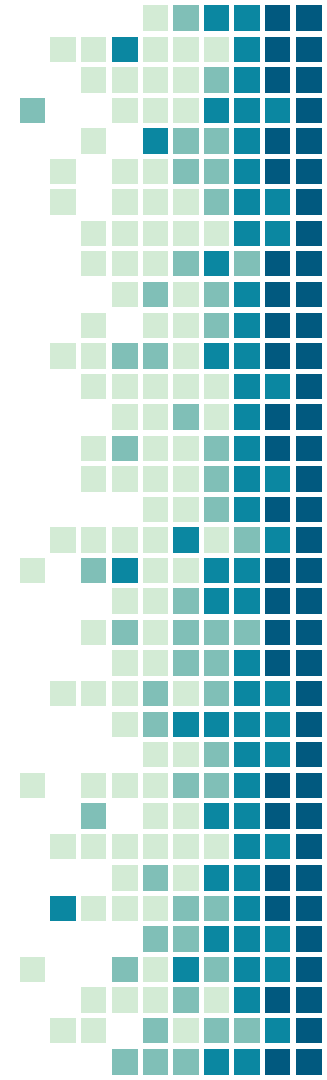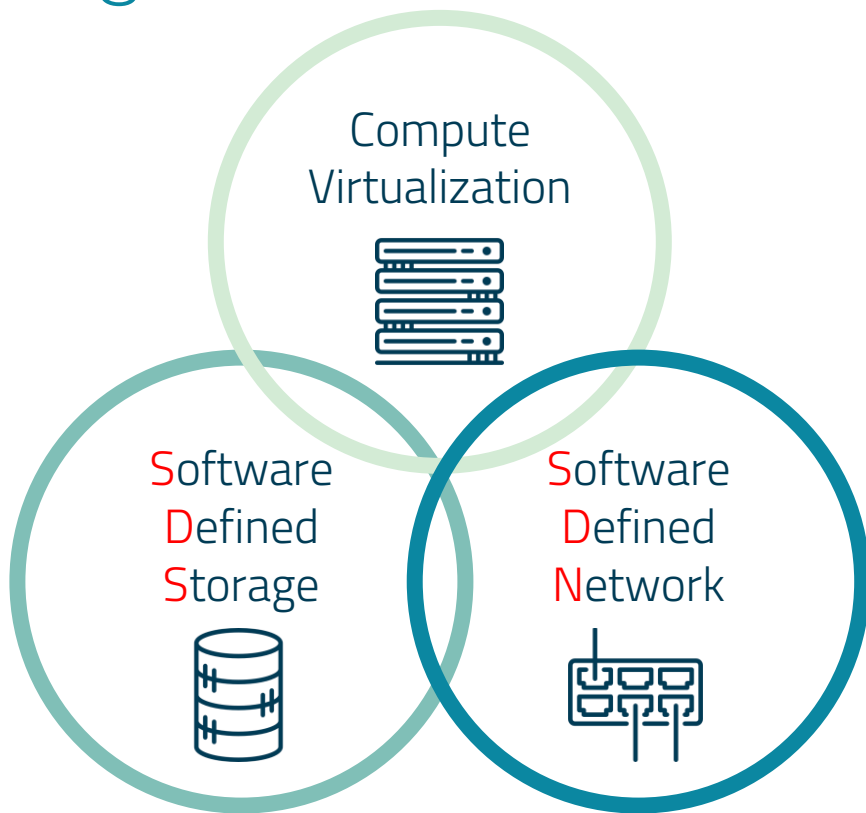
HCI help IT

Consolidate

- Server compute
- Storage
- Network switch

Ease

- Data protection
- Global management
- Installation and deployment

Benefits

- Cost effective : pay as you grow
- Scalability : easy to scale up and out
- High performance
- Increase efficiency
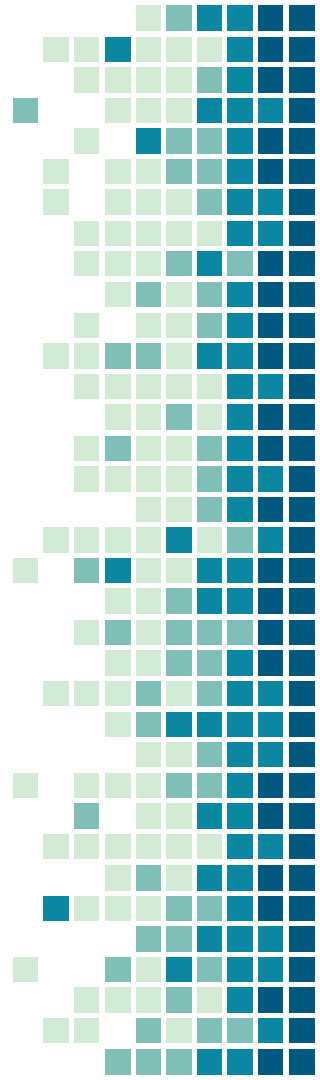- Improve agility

SDDC Requirement

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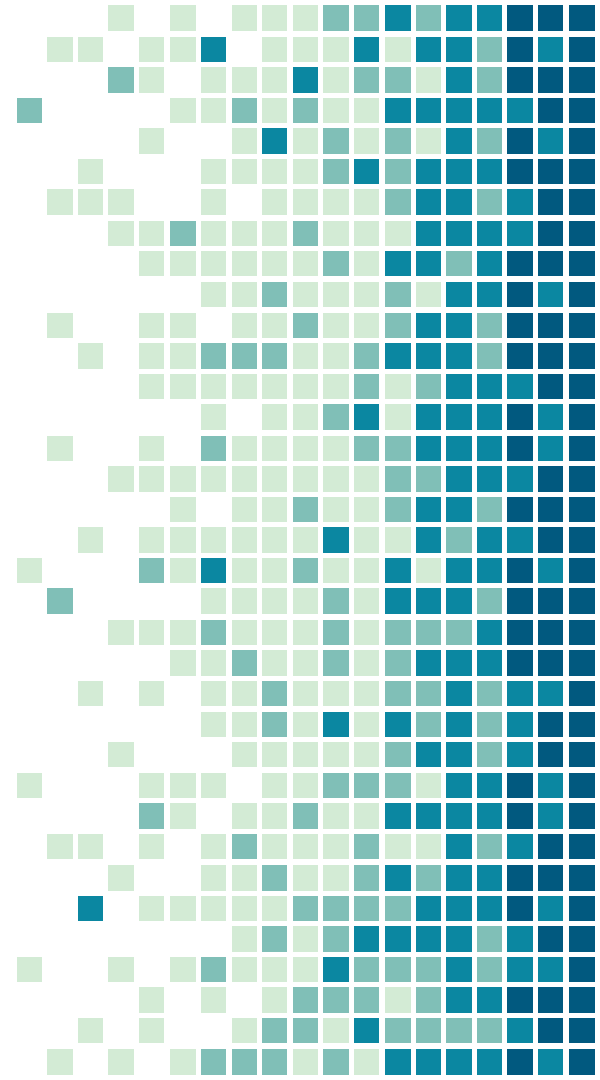- Compute Virtualization
- Automation
- Policy

Hyper
Converged
Infrastructure

4.

SDDC
Benefits

Not only for IT

SDDC Benefits using HCI

Time Savings
▷ Centralized Interface, no longer have to walk around and physically touch the actual hardware in order to accomplish most of their d2d task

Cost Savings
▷ Run on commodity hardware.
Resources are pooled together and consolidated.
Pay as you grow
Reducing operational time reduce the TCO.
Energy efficient system

Flexibility
▷ Quick response to the market and business change.
Provisioning task are perform on minutes instead of days or weeks

Simplify operations
▷ Centralized management, Automation and deep integration of all resources simplify the d2d activity

Analytics and Insights
▷ Monitoring of all integrated components opens up the possibility of using modern analytics tools to help to optimize the system for more efficient and cost-effective operation

Better Scalability
▷ Just add more simple and ship x86 Server to increase the total power and capacity of your datacenter
No more need to shutdown your infrastructure to migrate to newer system.
Highly performance using SDD/HDD and Flash

THANKS!

Any questions?

Data Doubles every two years

From 2013 to 2020, the digital universe will grow by a factor of 10, from 4,4ZB to 44 ZB*

2/3 of Data Is Created **by Consumers,** but **Enterprises** Are Responsible for **85%** of This

IT needs to adapt their infrastructure to address the storage challenge

*Source IDC 2014 ⇔ The digital Universe of Opportunities

Good Bye !

I am François Conza

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