

15.12.2025

W3C Web of Things Community Group Online Meetup 32:

# From WoT to Chain: Enabling Zero-Trust Oracles for Blockchain IoT Applications



**Ivan Dimitry  
Ribeiro Zyrianoff**

Research fellow at the  
IoT Prism Lab of  
University of Bologna



ALMA MATER STUDIORUM  
UNIVERSITÀ DI BOLOGNA

# Agenda

- Welcome
- News from the WoT CG
- Presentation from IoT Prism Lab by Ivan Zyrianoff
  - From WoT to Chain: Enabling Zero-Trust Oracles for Blockchain IoT Applications
  - Q&A Session
- Discussion
- Wrap up

Intro slides are publicly available:

<https://docs.google.com/presentation/d/1bYQHcKlmeMGR2CT3MWXJwDegtzpbZq5AKTssvVhR5Ww/edit?usp=sharing>

# W3C Community Contributor License Agreement (CLA)

We would like to remind you that contributions to the CG are subject to W3C Community Contributor License Agreement. Please visit:

<https://www.w3.org/community/about/process/cla/>

These include contributions to the repository or any reports we may write in the future.

# Welcome to the Meetup

# Greetings

WoT CG Co-Chairs:

Ege Korkan

- Email: [ege.korkan@siemens.com](mailto:ege.korkan@siemens.com)
- GitHub: [@egekorkan](https://github.com/egekorkan). [LinkedIn](#), [X](#), [Mastodon](#)



Cristiano Aguzzi

- Email: [relu.cri@gmail.com](mailto:relu.cri@gmail.com)
- GitHub: [@relu91](https://github.com/relu91). [LinkedIn](#), [X](#), [Mastodon](#)

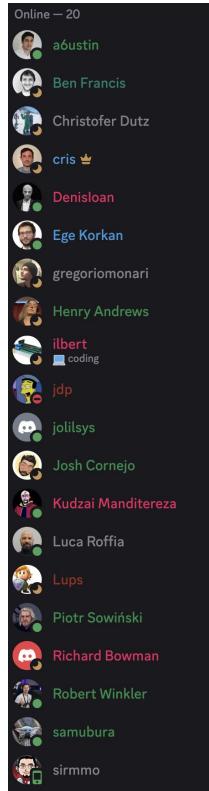


# Meeting Logistics

- Minute Taking:
  - Visible at <https://hackmd.io/@egekorkan/w3c-wot-cg-minutes>
  - Editable by scribes, commentable by everyone
  - Ege will be scribing today
- Questions: Use chat. We will respect the order

# Engage with the Community

Discord: <https://discord.gg/RJNYJsEgnb>



177 people are  
there already!

# Stay Informed

Subscribe to:

- Calendar: <https://www.w3.org/groups/cg/wot/calendar>
- YouTube: <https://www.youtube.com/@WoTCG>

Check:

- GitHub repository: <https://github.com/w3c/wot-cg>
- Homepage: [www.w3.org/community/wot/](https://www.w3.org/community/wot/)
- Administrative information: <https://www.w3.org/groups/cg/wot>
- W3C WoT: [www.w3.org/WoT/](https://www.w3.org/WoT/)

# Skip all that, join the group

CG Participation requires no W3C membership, thus it is free.

You create a W3C account and go to our homepage at

<https://www.w3.org/community/wot/>

**JOIN OR LEAVE THIS GROUP**

# Tutorial: What is WoT?

What is WoT Tutorial

Welcome to the tutorial page of Web of Things created by W3C Web of Things Community Group

[Start the tutorial](#)



**Structure of the tutorial**

Throughout this tutorial, you can learn about the Web of Things, its applications and tools for newcomers. All topics start with basic and advanced concepts. Then, hands-on exercises demonstrate the concepts with off-the-shelf libraries.



**What to expect**

It is aimed to make newcomers learn about Web of Things and speed their learning process. Each section is short, therefore you can learn about WoT bit by bit. At any time, you can come back and use this page as reference. This material does not consist of only explanations but is also supported with code snippets that you can work on and try by yourself.



**Learning Objectives**

At the end, you will have all the tools in your belt to build WoT applications. With all these tools, you can build actual software such as dashboards, protocol proxies and translators, smart internet-connected devices, mash ups of WoT devices and services, in many domains such as Smart Homes, Factory Automation.



**Official WoT Page**

This site is intended for the use of beginners to learn about the Web of Things concepts. The official site of Web of Things can be found at [w3.org/WoT](https://w3.org/WoT).



**Contribute & Collaborate**

This tutorial is a community-driven effort and always evolving. Each stage in our workflow is reviewed collaboratively as it progresses through storyboards, scripts, videos, and website updates. You can contribute directly to its development by providing feedback and opening issues through GitHub. Our [GitHub project](#) allows everyone to see the progress and the ongoing work.



**Stay Connected**

Stay up to date with the tutorial's progress and connect with the community. We host a weekly call to share updates and ideas. You can also join our Discord server or follow the latest developments in our GitHub repository.

[Weekly Call](#) | [Discord](#)

**WoT Tutorial Links**

- Introduction
- Preliminary Series - YouTube 
- Main Series - YouTube 

**Community**

- W3C WoT Community 
- WoT CG Discord 
- WoT CG YouTube 

**External Resources**

- Thing Description Specification 
- CG GitHub 
- WoT Landing Page 

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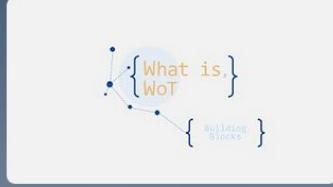
GitHub 

**What is WoT Tutorial**

by Web of Things Community Group

Playlist • 4 videos • 19 views

The core of the tutorial that explains the standards, how to use them and more!



**Building Blocks | What is WoT**

Web of Things Community Group • 105 views • 5 months ago



**Applications in Smart Homes and Smart Cities | What is WoT**

Web of Things Community Group • 55 views • 5 months ago



**Applications in Industrial and Agriculture Systems | What is WoT**

Web of Things Community Group • 37 views • 3 months ago



**Thing Description Introduction | What is WoT**

Web of Things Community Group • 86 views • 3 months ago

More videos in preliminary technologies!



Welcome | What is WoT

Web of Things Community Group • 377 views • 1 year ago

Payloads and Headers | What is WoT

Web of Things Community Group • 203 views • 1 year ago

JSON Introduction | What is WoT

Web of Things Community Group • 231 views • 1 year ago

JSON in Practice | What is WoT

Web of Things Community Group • 163 views • 1 year ago

JSON Schema Introduction | What is WoT

Web of Things Community Group • 120 views • 1 year ago

JSON Schema in Practice | What is WoT

Web of Things Community Group • 134 views • 1 year ago

JSON Schema Validators | What is WoT

Web of Things Community Group • 83 views • 1 year ago

OSI Layers & Network Topologies | What is WoT

Web of Things Community Group • 91 views • 1 year ago

# Link Slide

- [CG Homepage](#)
  - [Calendar](#)
  - [Discord](#)
  - [YouTube](#)
  - [GitHub](#)
  - [Mailing List](#)
- [W3C WoT Homepage](#)
- [Tutorial Homepage](#)

[Today's Intro Slides](#)

# News from the CG

# Everything from this group in the last year



<https://www.w3.org/2025/11/TPAC/demo-wot-cg-update.html>

# Collaboration with the Standardization

Still needs 100% confirmation and change to charter, but going forward:

- Plugfests will be organized by the WoT CG, opening it up to everyone
- Individual WoT Binding Specifications can be written in the CG

More in recent Pull Request: <https://github.com/w3c/wot-cg/pull/227>

# Events

- Over the holiday period: Let's collect Thing Models of devices around us!  
See more at the event instructions:  
<https://github.com/w3c/wot-cg/tree/main/Events/2025-12-TM-Challenge>
- Office Hours: Join in and ask questions to chairs, get implementation advice!
  - Every Thursday alternating between 9am CEST and 5pm CEST

# Presentation and Question Session

# Video Recording

We will be recording the speaker and stop the recording at the start of the Q&A session

# Speaker

Ivan Zyrianoff ([GitHub](#) | [LinkedIn](#)) from [IoT Prism Lab at the University of Bologna](#)

Ivan is a Research Fellow from the University of Bologna and a member of the IoT-Prism lab. He received a Ph.D. in structural and environmental health monitoring and management from the University of Bologna in 2024.

He was involved in numerous national and European projects centered on IoT applied to different contexts. His current research topics encompass interoperability for the Internet of Things, Edge Computing, and Edge Caching.





When asking questions, please briefly introduce yourself

# From WoT to Chain: Enabling Zero-Trust Oracles for Blockchain IoT Applications

# Meeting Minutes

Available after the meeting in our repository.

Official Position at  
Company

**John Doe**



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**John  
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Official Position  
at Company



**John Doe**

Official Position  
at Company

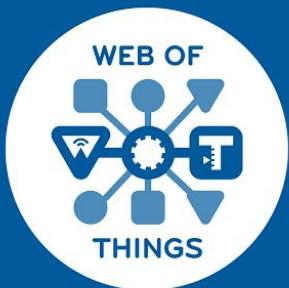
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**John Doe**

Official Position at  
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