Netcad Digital Universe

Beyond Iot, Meet IoB*

Manage your devices, sensors and cameras to collect and analyze telemetry data, visualize and orchestrate your universe.

*IoB - Internet of Behaviour

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Digital Universe

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Harness the Power of Digital Connectivity and Intelligence

Orchestrate your digital universe with unparalleled precision. Optimize your devices, sensors, and models to not only capture, but analyze telemetry data in real time. Visualize data patterns and employ proactive measures to enhance your IoT ecosystem.

Transform Ordinary Spaces into Smart Environments

Leverage the power of Smart Data to convert physical spaces into intelligent, responsive environments. Tune into the symphony of interconnectedness as we move towards a digitally harmonious future.

Experience Next–Gen IoT Solutions with NDU

NDU is more than a platform—it's your digital launching pad. Our platform serves as a comprehensive toolkit with:

1 Plug–and–play services, dynamic data models, and user–friendly interfaces designed for seamless integration.

2 Cutting–edge, ready–to–deploy edge, gateway and audio analytics AI libraries that empower your IoT and IoB applications.

3 A versatile mobile application that ensures scalability, customization, and sustainability of smart city solutions and Internet of Behavior applications, with expedited device onboarding capabilities.

Ignite your Digital Transformation Journey

No more navigating through tedious tasks or complex integration challenges. With NDU, connect your devices, sensors, or actuators effortlessly to the Netcad Digital Universe. Capitalize on our pre-built AI and IoT models, and launch them on your existing models with a single click.

Get started with NDU today—where your idea transforms into an IoT reality.

Effortless Device Integration

Synchronizing your devices with an IoT platform can present certain complexities. However, Netcad Digital Universe mitigates these challenges by supporting industry-standard protocols, including HTTP(S), MQTT, and CoAP. Delve into our Developers' Zone, leverage our prepared scripts in Python, C, and Java, and seamlessly onboard your devices to our IoT universe. Be part of an elite club revolutionizing the digital frontier.
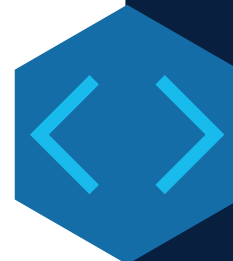
Customized Data Pipelines and Workflows

Harness the power of your data through tailored rules and algorithms. With Netcad Digital Universe, you can craft a data pipeline and workflow ranging from straightforward to intricate designs, perfectly aligning with your use case necessities. Manipulate and transmute data from devices or other sources based on specific attributes or content, initiate alarms, and seamlessly integrate your business logic through our intuitive visual designer.

Simplified Visual Programming

Immerse yourself in the simplicity of visual programming without the need for intricate coding skills. Choose your data sources and algorithms, connect the blocks, and build your bespoke flows and rules. No longer is programming a barrier to IoT integration.

Cloud or On-Premise: Unbridled Flexibility

Experience unmatched flexibility with our Cloud and On-Premise offerings, each delivering identical functionality. Our Cloud instance accelerates device integration and user creation, while On-Premise installation can be accomplished on any private cloud, PC, or even a personal laptop.

Smart Data for Smart Places

Cross-Industry Applications

From smart lighting in Smart Parks to safety in public transport, our solution aids in diverse sectors:

- Smart Lighting
- Smart Park
- Transport Safety
- Area Management
- People Analytics
- Public Safety
- Disaster Management
- Agriculture
- Infrastructure Monitoring
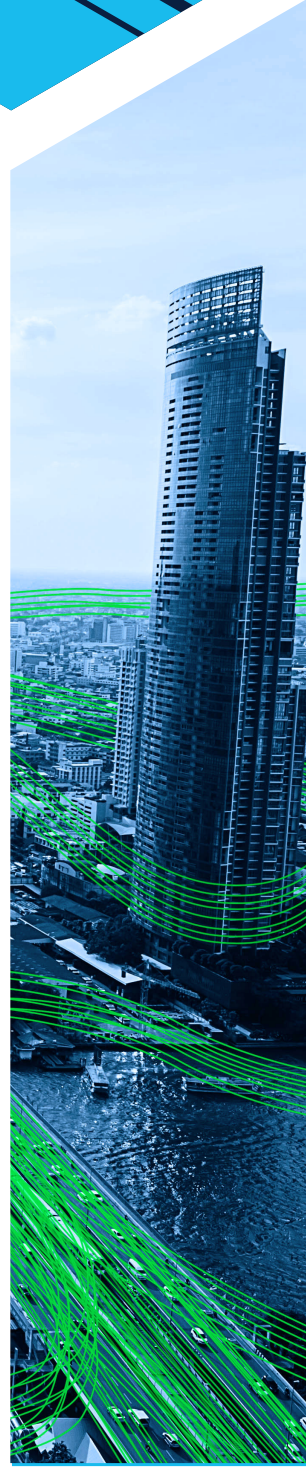- Occupational Safety and Health (OSH)

Diverse Data Sources

Harness data from a myriad of IoT Sensors such as air quality, temperature, humidity, wind, motion, light, and more. We also support acoustic sensors and microphones for a holistic data gathering approach.

Scalability and High Availability

With unlimited storage and analysis capabilities in our Cassandra database, tailor-made for time-series data storage and querying, we ensure high availability and fault-tolerance. Enhancing storage and analysis capabilities is a breeze; simply augment your server or cloud resources.

Scalable Performance

Netcad Digital Universe, built on a microservices architecture, promises horizontal scalability. Every server node in the cluster is unique, achieving scalability through a consistent-hashing load balancing algorithm between cluster nodes. The actual performance is usage scenario-dependent; for instance, a small commodity hardware cluster can support several millions of devices connected over MQTT. Navigate the digital universe with the freedom to expand.

API/SDK

Unlock your coding potential with Netcad Digital Universe's sophisticated SDK and APIs tailored specifically for developers. Harness the power of popular languages – Python, Java, C++ – to shape unique, custom developments. Our platform eliminates boundaries, empowering users to select their preferred programming language to interface with NDU's services or transmit their telemetry data. Transform your coding dreams into reality with our expansive digital universe.

Customization

Enjoy a comprehensive array of ready-made widgets and infinitely customizable dashboards, all at your fingertips. Experience the effortless convenience of a visual programming interface, and the drag-and-drop rule chains. Unleash creativity and practicality with custom actions, fine-tuning your experience to fit your exact needs.

Alarms Management

Experience the power of dynamic alarms management, designed to monitor and manage alarms linked to all your critical entities – devices, assets, customers, and more. Enjoy real-time monitoring and alarm propagation within your entities hierarchy, and stay alerted about device disconnects or inactivity events.

Maps

Netcad Digital Universe's map functionality boasts robust support for nearly all map layers. Visualize all your devices on a single custom map, allowing real-time viewing of alarms and data. Transform map control from an idea to a reality, commanding your devices directly from the map interface.

Reports, Actions, Widgets, User Management, Logs

Unlock the potential of comprehensive reports, dynamic actions (RPC, Commands, Controllers), intuitive widgets, streamlined user management, and transparent logs – all streamlined for a seamless experience.
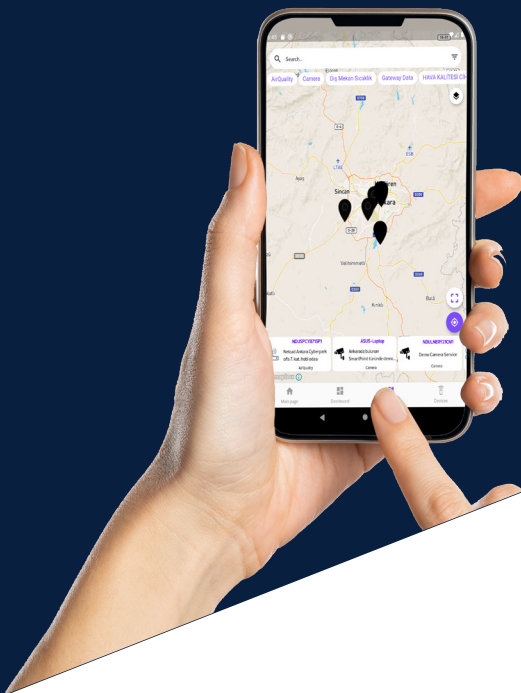
Dashboards

We, at Netcad Digital Universe, harbor a passion for dashboards. These ingenious tools offer information in a uniquely smart and accessible manner. With our platform, design intuitive dashboards for visualization or device control using 30+ customizable widgets. From live charts, maps, gauges, and more, the choices are endless. Or, stand out from the crowd by developing your very own.

Always With You

Carry the power of Netcad Digital Universe in your pocket. All functionalities, including dashboards, alarms, and reports, are conveniently available in our mobile app. Keep track of your smart solutions on the go. Notifications, alarms, and dashboards are just a tap away.

Multi-tenancy

Netcad Digital Universe supports multi-tenant installations right out of the box. One single tenant can effortlessly manage multiple tenant administrators, millions of devices and customers, harmonizing convenience with efficiency.

Device Management

Empower your operations with our effective device management capabilities. Register and manage devices with ease, monitor client-side and provision server-side device attributes. Our API opens up possibilities for server-side applications to send RPC commands to devices, and vice versa, bridging the gap between your devices and you.

Security

Discover secure connectivity with Netcad Digital Universe, where stringent data protection is our priority. Our system operates on MQTT (over SSL) or HTTPS protocols, establishing a strong transport encryption. Every device is equipped with unique access token credentials, ensuring a secure connection setup. Whether you choose a cloud or on-premise solution, your data visibility is always streamlined with your organization's authorization scheme. Additionally, we support OAuth 2.0, paving the way for secure Single Sign-On (SSO).

Integration

Netcad Digital Universe offers a flexible approach to integration. Beyond MQTT, CoAP, Modbus, and HTTP, we empower you with the capacity to implement your own transport or fine-tune the behavior of existing protocols.

NDU Advantages

With NDU, not only do you slash your development time and maintenance workload, but you also optimize your CAPEX and OPEX in IoT and Computer Vision projects. Run State-of-the-Art AI algorithms on your existing hardware, discover insights beyond your perception, and unify software solutions to enable sustainability.

✓ Holistic Approach

We advocate for comprehensive integration and open standards over siloed micro-solutions. We're all about creating a unified, interconnected digital universe.

✓ Cost-Effective

NDU safeguards your investments, devices, and infrastructure, promoting a cost-effective "pay-as-you-go" model that respects your budget while maximizing benefits.

✓ Versatile Platform

Embrace versatility with NDU, enabling all your scenarios on a single, powerful platform.

✓ Freedom

NDU is all about liberating your vertical solutions, giving you the freedom to innovate and excel.

✓ Futuristic

Stay ahead of the curve with our 5G-ready, cloud-native edge libraries, preparing you for the future of digital connectivity.

✓ Co-creation

Our well-documented API and SDK foster co-creation, making it easier for you to build on our robust technology.

✓ Cool Factor

Dare to venture beyond the conventional. At NDU, IoT sensors aren't limited to the traditional; we incorporate cameras and microphones to elevate your IoT experience.

✓ Humanized Approach

We're redefining simplicity with our low-code/zero-code solutions, making technology more accessible and human-centric.

✓ Spatial

Leverage location-enabled data collection complemented by robust map and GIS support for a comprehensive spatial understanding of your operations.

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