

## GETTING STARTED

# Quick start: first live data

Sign in, add a channel, a device and tags, see live values, connect an OPC UA client.

Online: [mergenhub.envest.com.tr/docs/quick-start](https://mergenhub.envest.com.tr/docs/quick-start)

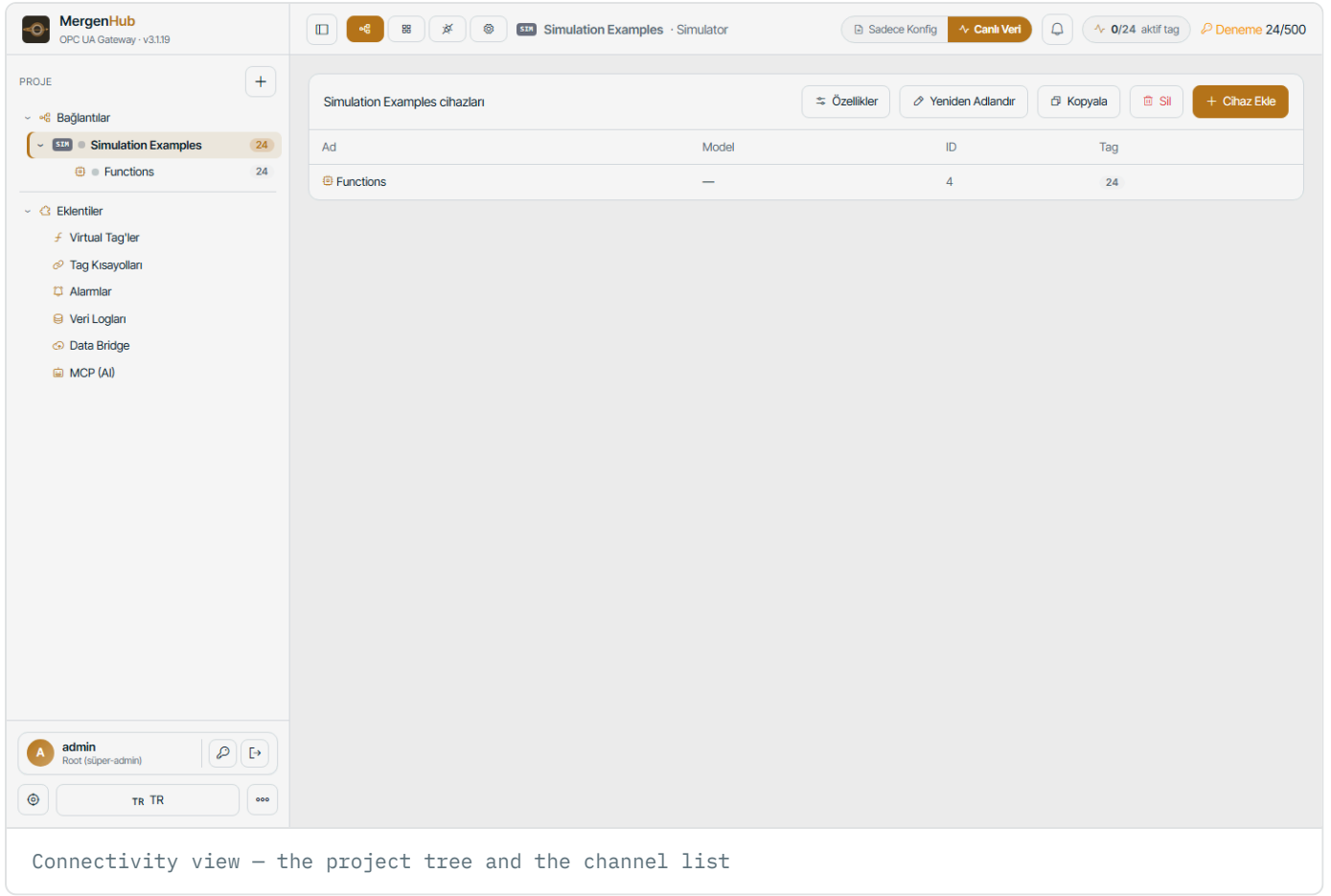
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This walk-through takes you from a fresh installation to live values in an OPC UA client in about ten minutes. The screenshots use the built-in **simulator** so you can follow along without any hardware.

## 1. Sign in

Open the web UI ( `http://localhost:8090` by default) and sign in as `admin` . The left tree is your **project**: *Connectivity* holds channels, devices and tags; *Extensions* holds virtual tags, aliases, alarms, historian, Data Bridge and MCP.



## 2. Add a channel

Click **+ Add channel**, choose a driver and give it a name. For a real device pick the protocol (for example *Modbus TCP/IP Ethernet*); for this tour pick **Simulator**. Every driver has its own channel settings (network adapter, serial port, timeouts, retry policy) — the defaults are safe to keep.

**Tip** A channel is one physical or logical connection. Devices on the same Modbus TCP switch can share one channel; devices on different serial ports need one channel per port.

## 3. Add a device

Select the channel and click **+ Add device**. Enter the device's address (for Modbus TCP `10.0.0.5:502` plus the unit ID, for S7 the IP and rack/slot, for 61850 the IED address). Set the **scan rate** (how often the device is polled, in milliseconds) and, if needed, timeouts and retries.

## 4. Add tags

Select the device and use **+ Add tag** or **Generate tags**:

- **Add tag** — name, address, data type, read/write, optional scaling and description.
- **Generate tags** — creates many tags at once from an address range or from the device itself (online browse for OPC UA, 61850, DNP3, IEC 104, OMRON NJ symbols, MQTT topics).
- **Address hints** — the ? next to the address field lists the address formats the driver understands, with examples.

**MergentHub**  
 OPC UA Gateway - v3.119

PROJE
 

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 Virtual Tag'ler
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admin

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 Sadece Konfig
 Canlı Veri
 24/24 aktif tag
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 Diagnostics
 Yeniden Adlandır
 Kopyala
 Sil
 + Tag Ekle
 Grup Ekle

Ad veya adres ile ara...
 24 tag
 Sistem tag'leri
 Canlı veri

| Ad      | Adres                                          | Tip    | Tarama | Değer        | Kalite | Zaman        |
|---------|------------------------------------------------|--------|--------|--------------|--------|--------------|
| Ramp1   | RAMP (120, 35, 100, 4)                         | Long   | 100    | 37.63        | Good   | 18:48:42.167 |
| Ramp2   | RAMP (300, 150.750000, 200.500000, -0.250000)  | Float  | 100    | 198.81       | Good   | 18:48:42.167 |
| Ramp3   | RAMP (250, 0, 1000, 1)                         | Word   | 100    | 8.12         | Good   | 18:48:42.167 |
| Ramp4   | RAMP (2000, -1000, 1000, -5)                   | Long   | 100    | 994.93       | Good   | 18:48:42.167 |
| Ramp5   | RAMP (250, -1000000, 1000000, -500)            | Date   | 100    | 995942.00    | Good   | 18:48:42.167 |
| Ramp6   | RAMP (1000, 0, 1000000000, 1250)               | LLong  | 100    | 2536.25      | Good   | 18:48:42.167 |
| Ramp7   | RAMP (1000, -1000000000, 1000000000, -5555)    | Date   | 100    | 999988728.90 | Good   | 18:48:42.167 |
| Ramp8   | RAMP (1000, 150.750000, 200.500000, -0.250000) | Double | 100    | 199.99       | Good   | 18:48:42.167 |
| Random1 | RANDOM (30, -20, 75)                           | Short  | 100    | -10.13       | Good   | 18:48:42.167 |
| Random2 | RANDOM (100, 0, 1000)                          | Word   | 100    | 381.20       | Good   | 18:48:42.167 |
| Random3 | RANDOM (100, -1000, 0)                         | Long   | 100    | -510.52      | Good   | 18:48:42.167 |
| Random4 | RANDOM (1000, -999, 999)                       | Long   | 100    | -630.22      | Good   | 18:48:42.167 |
| Random5 | RANDOM (100, -1000000000, 1000000000)          | Long   | 100    | 431500399.97 | Good   | 18:48:42.167 |
| Random6 | RANDOM (1000, -1000000, 1000000)               | Date   | 100    | 451194.95    | Good   | 18:48:42.167 |
| Random7 | RANDOM (1000, 0, 1000000000)                   | LLong  | 100    | 979424945.12 | Good   | 18:48:42.167 |
| Random8 | RANDOM (100, 0, 1000000)                       | LLong  | 100    | 584115.86    | Good   | 18:48:42.167 |
| Sine1   | SINE (10, -40.000000, 40.000000, 0.050000, 0)  | Float  | 100    | 23.81        | Good   | 18:48:42.167 |

Tag table of a device – value, quality and timestamp update live

## 5. Watch live values

Switch the top bar to **Live data**. Each tag shows its current value, **quality** (Good / Bad / Uncertain) and timestamp. A red quality means the device could not be read; the *Diagnostics* button on the device shows the raw request/response frames and the last error.

## 6. Connect an OPC UA client

Point any OPC UA client (UaExpert, Kepware, Ignition, a PLC) to:

```
opc.tcp://<host>:48010/MergenHub
```

Browse *Objects* › *<channel>* › *<device>* to find your tags. With the installer defaults anonymous access and untrusted certificates are accepted; harden this later in *Settings* › *OPC UA Server* (security policy, user authentication, trusted client list). Details: [OPC UA server](#).

## 7. Read the same values over REST

```
curl -c c.txt -X POST http://localhost:8090/auth/v1/login -H "Content-Type: application/json" -d "{ \"username\": \"admin\", \"password\": \"<password>\" }"
curl -b c.txt "http://localhost:8090/runtime/v1/values?tags=Simulation%20Examples.Functions.Ramp1"
```

The full API is documented in the application under ... › *REST API* (Swagger) and in [REST API](#).

## 8. Build a first screen

Open **SCADA**, create a screen, drag a tank and a pump from the symbol library, bind their properties to tags and press **Run**. See [SCADA / HMI](#).

### What to configure next

- **Alarms** — thresholds on critical tags with e-mail/SMS notification: [Alarms](#)
- **Historian** — log groups for the tags you need trends on: [Historian](#)
- **Users** — operator accounts with limited rights: [Users, groups and security](#)
- **Publishing** — access from other sites or the internet: [Publishing on a domain](#)
- **License** — enter your key to lift the trial limits: [Licensing](#)