

Production Supporting Systems in Factories

ระบบสนับสนุนการผลิตในโรงงานอุตสาหกรรม

Cloud database

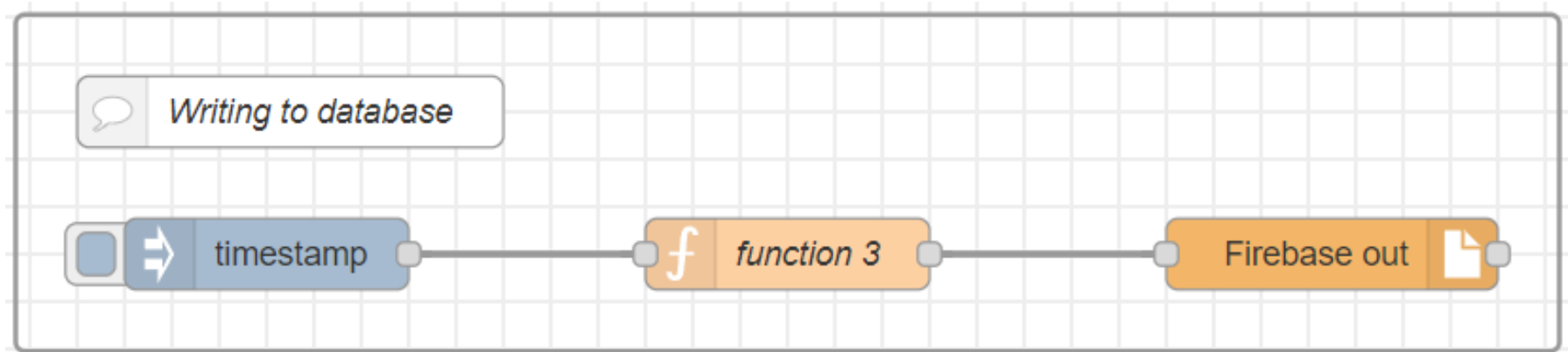
Setup `node-red`

- Install `node-red-contrib-cloud-firestore`

Setup database

- Go to [Google Firebase](#).
- Create new project.
- Create `firestore database`.
- Obtain a service-account `json`.

M6-1: Writing to database



function node

```
const timestamp = new Date().getTime();
const value = Math.random();
msg.payload = {
  value: value,
  timestamp: timestamp,
};
return msg;
```

firebase out node


- Input service account data.


Edit Firestore out node > **Edit firebase admin node**

Delete Cancel Update

Properties

Provide contents of the service account file

 Name Prodsup

 Service Account Json

```
{
  "type": "service_account",
  "project_id": "prodsup-lecture",
  "private_key_id":
    "4c1169aabd63227e44efff14348bcff63a9227aa",
  "private_key": "-----BEGIN PRIVATE KEY-----
\nMIIEvwIBADANBgkqhkiG9w0BAQEFAASCBBKk
wggSIAGEAAlBAQDm1BHg7r3kBVf9\nQ4QViZh
285EtVYB0tnLpQMy+67RHmgI//wF4tQ2W8vcrW
HWT9Vku5SXNdFsGJQOS\nR0oW72SwjHx+5Z9
PBNFQXe/qvAZycmhjxx57kRNmPiP+5MKtCps5
OuEHjQxZhGA9\nTrsyET6kG/J45x5VsQJD+qe2x
4lirwSI7wboAuWCSFptLpr5gMS6i6TAQkpP4Lso\
nSyPul+tXK9vYSNPpGA55JU65M26ZxckVoyJv+
xibGkMsnLalODiYKLIUnbiAna1d4\n4zt1n6feGOs
```

- Operation: Add
- Collection: data

Edit Firestore out node

Delete Cancel Done

Properties

Admin Prodsup

Node Name Firebase out

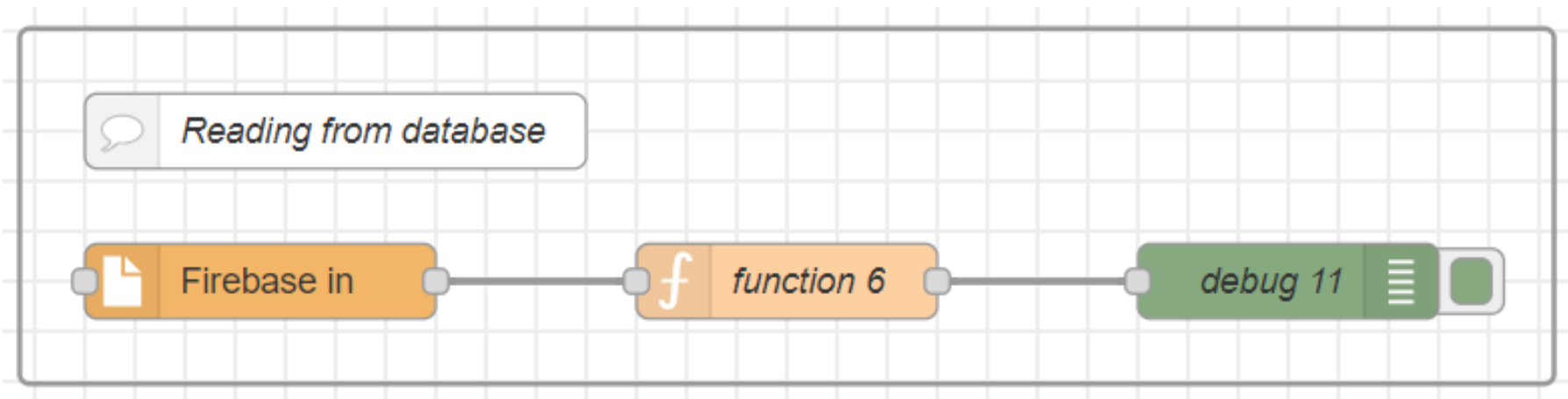
Operation Add

Collection data

Document document ref

! Expert zone

M6-2: Reading from database



firestore out node

- Collection: data
- Realtime: enabled
- Query
 - OrderBy: timestamp
 - Limit: 5

Edit Firestore in node

Delete
Cancel
Done

Properties

Admin
Prodsup

Node Name
Firebase in

Collection
data

Document
doc name

Realtime
☒

Group
☐

Query

Method
Arguments

orderBy
timestamp

direction
ascending

limit
5

function node

```
let payload = msg.payload;
let textOut = "";

for (const [key, value] of Object.entries(payload)) {
  const date = new Date(value.timestamp);
  const datestring = date.toLocaleDateString();
  const timestring = date.toLocaleTimeString();
  const reading = value.value.toFixed(2);
  textOut += `${datestring} ${timestring}: ${reading} \n`;
}

msg.payload = textOut;
return msg;
```