# Architecture

## Overview

UDIS architecture is layer designed, there are total 4 layers and a few types of interface defined in the system as descript as follow.



## Layers

### Application Layer

This layer is user oriented. User always requests the first level business from the Module locate in Application Layer, which always provides most human view and act as business sponsor.

UDIS GUI locates in Application Layer, which can provide Asset Management, User Account Management, Collection Scheme Setting, Data View, Read Out Result Search, and other features.

### Business Layer

Module in Business Layer will transition from abstraction to concretization. It changes the Business Services from Application Layer into Task Services. And send Task Services into Protocol Layer. From the Task Service view, Modules in this layer always act as **Producer**.

### Protocol Layer

From the Task Service view, Modules in this layer always act as **Consumer**. Approaches of how to process the Task Service is located in this layer. PDU Request which would send to Smart Device is generated in this layer.

For different Smart Device Protocol, approaches of how to process the Task Service are **disparate**.

Collection, RCS and FWU module contain the feature of Business Layer and Protocol Layer; all of them are designed base on the Business Layer part and Protocol Layer part. In order to support the special behavior of WEG meter, Executable module “Collection\_Weg” is extended beside the “Collection\_Dlms47” module.

### Communication Layer

This layer is responsible for communication issues. It will be regardless with Smart Device Protocol. It takes care of the approaches of how to **transfer** data.

Router Module takes responsibility of the internal communication; it acts as a router to transfer data between the services in UDIS internally. FEE is used to communicate with Device directly. FEE\_dlms47 is used for data transferring of Data under IEC 62056-47 Protocol, and FEE\_dlms46 is used for data transferring of Data under 62056-46 Protocol.