LIN Description File (LDF)

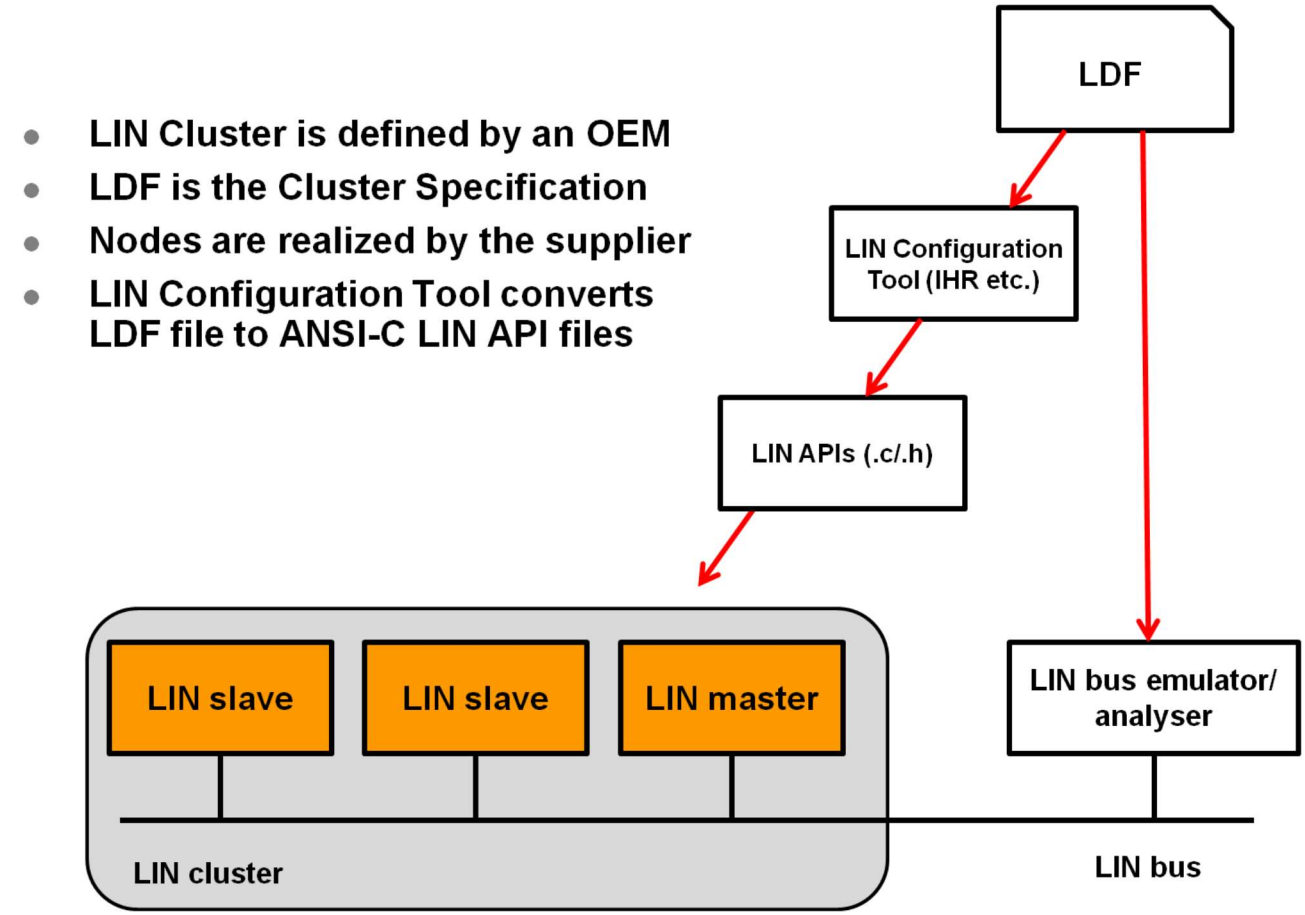
The configuration of the Local Interconnect Network (LIN) network cluster, i.e. the specification of:

- Network publishers and subscribers
- Signals
- Frames

is managed in the LIN Description File (LDF). This is an ASCII-text file created by the network designer and provided to vendors who will be developing LIN Master/Slave node hardware/software.

From the LDF, ANSI-C driver code and header files are automatically generated using suitable tools, such as the IHR LIN Driver Configuration Tool (https://www.ihr.de/index.php/en/88-produkte/lin-software-solutions/139-englisch).

Basic Workflow



(/local--files/lin:workflow/lin-workflow.png)

LDF

- Defined by consortium.
- Global description language:
  - One single file describes a complete LIN network.
  - Universal file for embedded software, test, validation, and analysis tools.
- Defines cluster information:
  - Protocol Version.
  - Language Version.
  - Bus Speed.
  - Node List.
  - Signals.
  - Frames.
  - Schedule Tables.

LDF Header Section

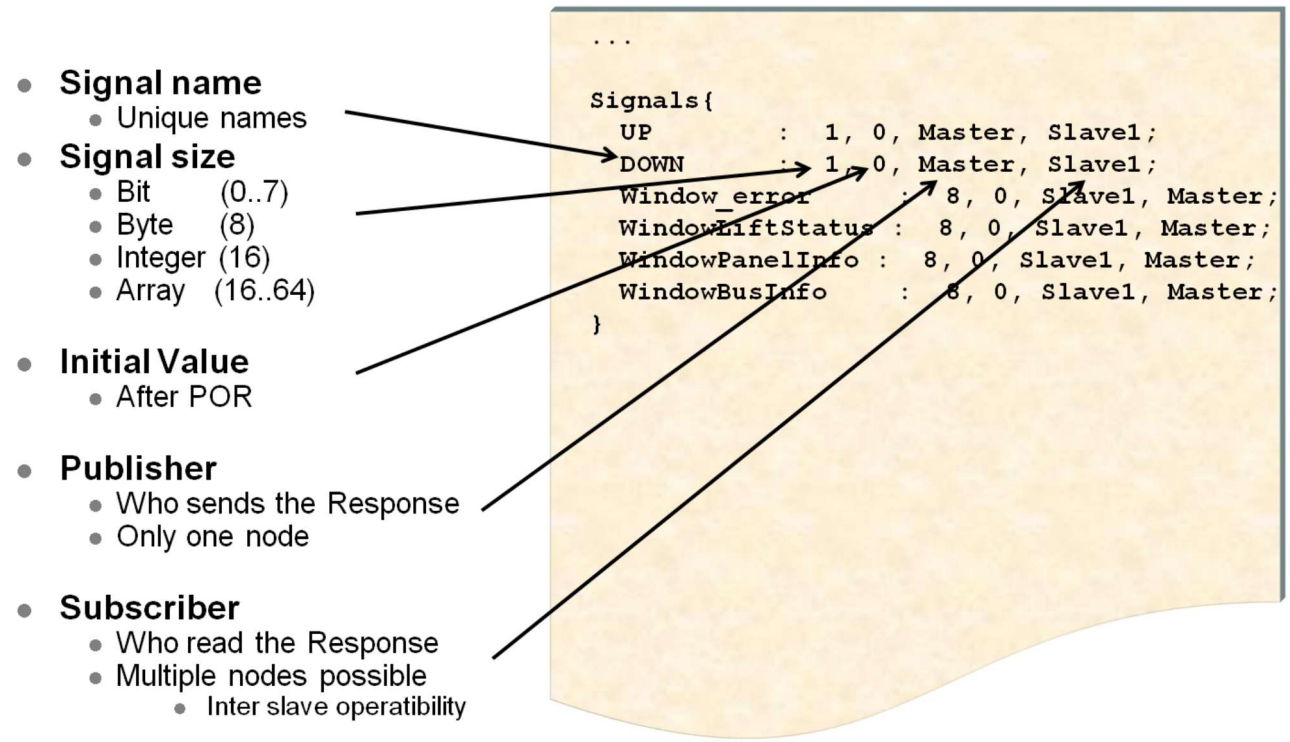
- **Protocol version**
- **Language version**
- **Bus speed**
- **Nodes**
  - Master
    - **Node name**
    - **Timer base**
    - **Jitter**
  - Slave
    - **Involved nodes**

```
...

LIN_description_file;
LIN_protocol_version = "2.0";
LIN_language_version = "2.0";
LIN_speed = 10.4 Kbps;


Nodes {
     Master : Master,10 ms, 0.1 ms;
     Slaves : Slave1;
}
```

(/local--files/lin:protocol-app-ldf/ldf-header.png)

LDF Signal Definition Section

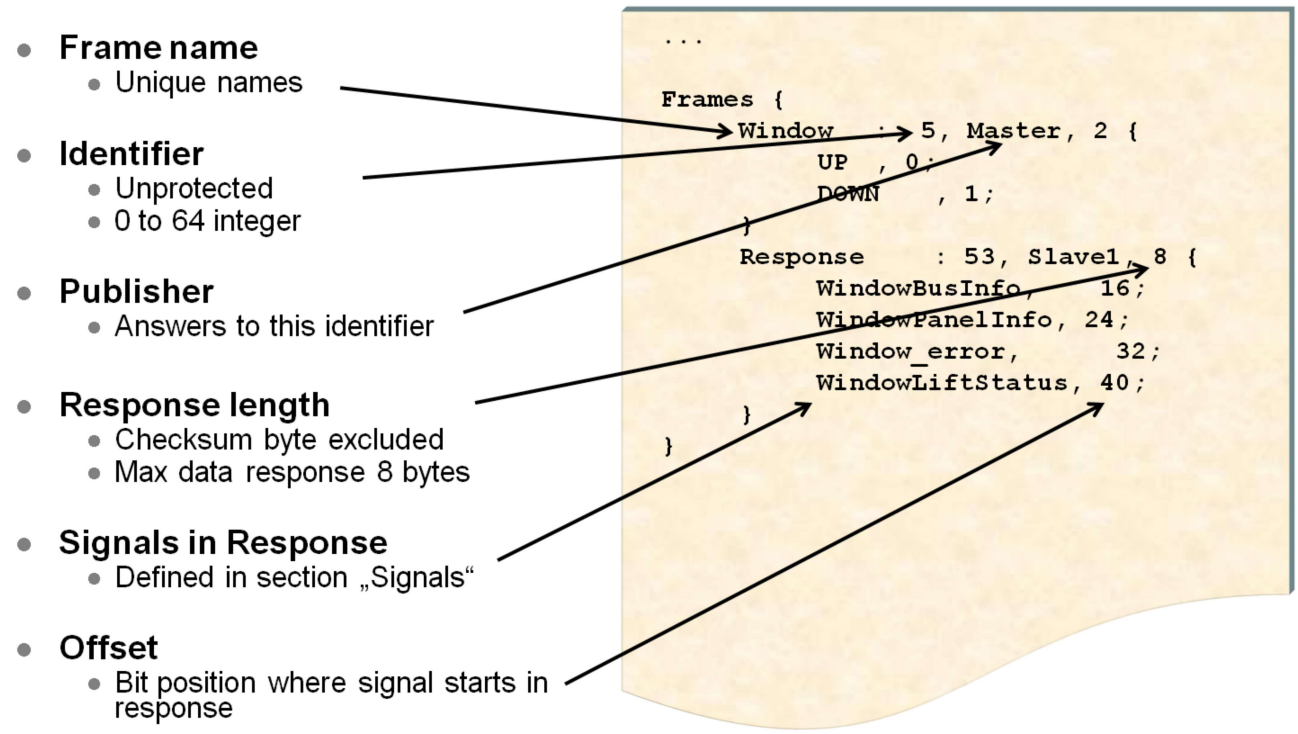
LDF Signals (/lin:protocol-dll-signals)



(/local--files/lin:protocol-app-ldf/ldf-signals.png)

LDF Frame Definition Section

LDF Frames (/lin:protocol-dll-frame-types)



(/local--files/lin:protocol-app-ldf/ldf-frames.png)

Further Reading

A detailed description of the LIN Configuration Language is provided in Section 9 of the LIN v2.2A Specification (/local--files/lin:specification/LIN-Spec_2.2_Rev_A.PDF).