How to Log

Module description

In this module, we will learn how to log in ndnSIM.

There are multiple ways to log in ndnSIM. We will discuss them one by one.

Procedure

1. Using `NS_LOG`

`NS_LOG` is a macro defined in `ns3/log.h` file. It is used to log in ndnSIM. It is used as follows:

```
NS_LOG_INFO("Some information");

NS_LOG_DEBUG("Some debug information");

NS_LOG_WARN("Some warning");

NS_LOG_ERROR("Some error");
```

2. Using `NS_LOG_COMPONENT_DEFINE`

`NS_LOG_COMPONENT_DEFINE` is a macro defined in `ns3/log.h` file. It is used to log in ndnSIM. It is used as follows:

```
NS_LOG_COMPONENT_DEFINE("Some component");

NS_LOG_INFO("Some information");

NS_LOG_DEBUG("Some debug information");

NS_LOG_WARN("Some warning");

NS_LOG_ERROR("Some error");
```

To see the logs, you need to set the log level of the component. It can be done as follows:

```
LogComponentEnable("Some component", LOG_LEVEL);

NS_LOG="<Component name>:<Log level>" ./waf --run <program name>
```

We can use `grep` in linux to filter the logs. For example, if we want to see only the `INFO` logs, we can use the following command:

```
NS_LOG="Some component:*" ./waf --run <program name> | grep "INFO"
```