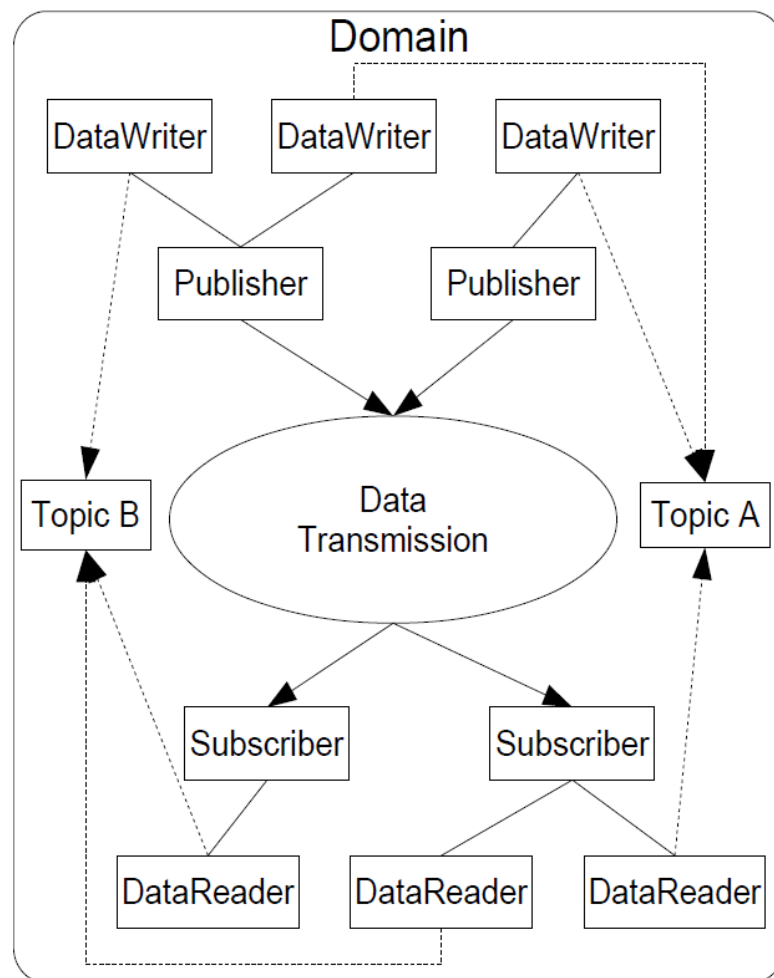

통신 미들웨어 OpenDDS 설치

컴퓨터 통신 실습
홍석준

OpenDDS

- ❑ 오픈 소스 코드
- ❑ 여러 DDS(Data Distribution Service) 스펙에 따라 구현된 프로그램 중의 하나
- ❑ OpenDDS 프로그램 동작은 아래와 같음

Figure 1-1 DCPS Conceptual Overview



OpenDDS의 구성도

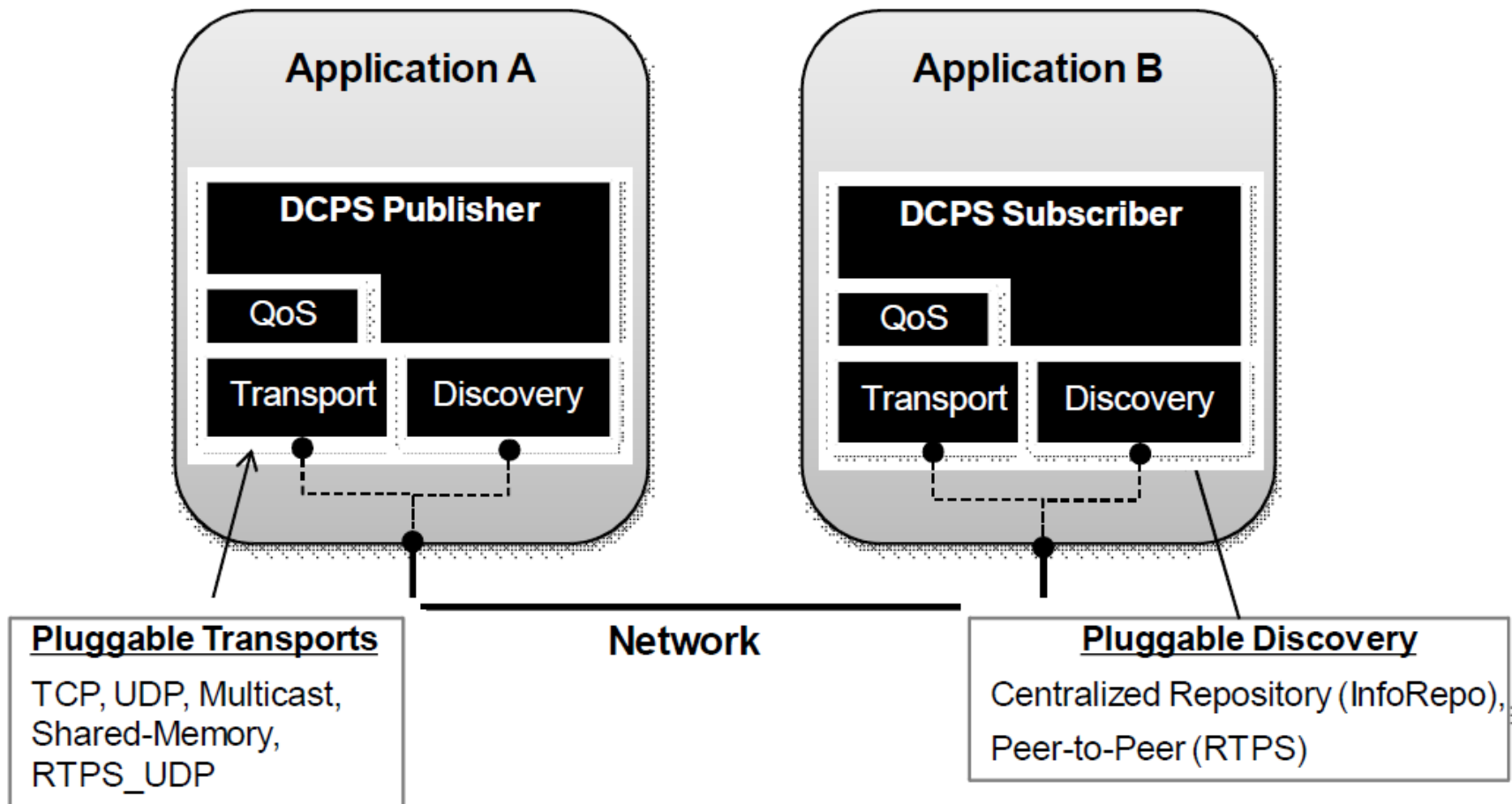


Figure 1-2 OpenDDS Extensible Transport Framework

OpenDDS 설치하기

OpenDDS 소스 코드 설치하기

- ❑ <http://opendds.org/> 로 들어가서 QuickStart -> Linux (위 배너중에서) 를 선택
- ❑ OpenDDS 소스 다운 받기(아래 그림 다운로드 사이트에서)
 - OpenDDS-3.12.tar.gz파일을 클릭해서 다운로드
 - 다운로드 폴더에서 cp OpenDDS-3.12.tar.gz ~/ 입력해서 홈계정으로 이동
 - tar -xzf OpenDDS-3.12.tar.gz로 압축풀기

Linux/Solaris/MacOSX

The goal of this guide is help you download and compile OpenDDS and run a simple example.

Build Directions

1. Ensure that your environment has:
 - a C++ compiler
 - GNU Make
 - Perl
 - Optional Java SDK 1.5 through 1.8 for Java JNI binding supportSee [Building](#) for a complete list of dependencies and supported platforms.
2. Download and extract the latest tar.gz file from the [download site](#)
3. Enter the OpenDDS-<version> directory
4. `./configure` (To enable Java bindings, use `./configure --java`)
5. `make`

See [Support](#) if you encounter problems with configuration or building.



OpenDDS 설치하기

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 - cd OpenDDS-3.12로 들어가서 그림과 같은 명령어 수행

Linux/Solaris/MacOSX

The goal of this guide is help you download and compile OpenDDS and run a simple example.

Build Directions

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See [Support](#) if you encounter problems with configuration or building.



OpenDDS 설치하기

OpenDDS 소스 코드 설치하기

❑ OpenDDS 예제 프로그램 수행

- OpenDDS폴더에서 아래 그림의 명령어를 차례로 수행

Run the Messenger Example

1. `source setenv.sh`
2. `cd DevGuideExamples/DCPS/Messenger` for C++ example or `cd java/tests/messenger` for Java example
3. `./run_test.pl`

The Messenger Example starts an InfoRepo, publisher, and subscriber. The InfoRepo allows the publisher and subscriber to find each other. Once the publisher finds the subscriber, it sends 10 messages to the subscriber and waits 30 seconds for the subscriber to acknowledge the messages.

Note: The setenv.sh script sets various environment variables needed for running OpenDDS tests. Be sure to source setenv.sh if you start a new terminal session.

OpenDDS 설치하기

OpenDDS 소스 코드 설치하기

❑ OpenDDS 예제 프로그램 수행 결과

- 아래와 같은 그림으로 수행되면 설치완료 및 동작 성공

```
sjhong@ubuntu: ~/OpenDDS-3.12/DevGuideExamples/DCPS/Messenger
count      = 9
text       = Worst. Movie. Ever.
SampleInfo.sample_rank = 0
SampleInfo.instance_state = 2
SampleInfo.sample_rank = 0
SampleInfo.instance_state = 2
SampleInfo.sample_rank = 0
SampleInfo.instance_state = 2
SampleInfo.sample_rank = 0
SampleInfo.instance_state = 2
SampleInfo.sample_rank = 0
SampleInfo.instance_state = 2
SampleInfo.sample_rank = 0
SampleInfo.instance_state = 2
SampleInfo.sample_rank = 0
SampleInfo.instance_state = 2
SampleInfo.sample_rank = 0
SampleInfo.instance_state = 2
SampleInfo.sample_rank = 0
SampleInfo.instance_state = 2
SampleInfo.sample_rank = 0
SampleInfo.instance_state = 2
INFO: /home/sjhong/OpenDDS-3.12/bin/DCPSInfoRepo being killed.
sjhong@ubuntu:~/OpenDDS-3.12/DevGuideExamples/DCPS/Messenger$
```

OpenDDS 설치하기

OpenDDS 소스 코드 설치하기

❑ OpenDDS 예제 프로그램 수행 결과 분석

- 위 프로그램은 여러 프로그램을 한꺼번에 실행한 것으로 DDS Publisher/Subscriber가 함께 동작되어 송수신까지 완료한 것임

```
sjhong@ubuntu: ~/OpenDDS-3.12/DevGuideExamples/DCPS/Messenger
ncontext
TAO (72345|140424205043520) - Default ORB services initialization begins
TAO (72345|140424205043520) - ORBInitializer_Registry::register_orb_initializer
0 @0x1e6e440
TAO (72345|140424205043520) - ORBInitializer_Registry::register_orb_initializer
1 @0x1e6b870
TAO (72345|140424205043520) - Default ORB services initialization completed
TAO (72345|140424205043520) - We are the default ORB ...
TAO (72345|140424205043520) - Initializing the orb-specific services
/home/sjhong/OpenDDS-3.12/DevGuideExamples/DCPS/Messenger/publisher -ORBDebugLe
vel 10 -DCPSDebugLevel 10 -ORBLogFile publisher.log
/home/sjhong/OpenDDS-3.12/DevGuideExamples/DCPS/Messenger/subscriber -ORBDebugL
evel 10 -DCPSDebugLevel 10 -DCPSTransportDebugLevel 6 -ORBLogFile subscriber.log
SampleInfo.sample_rank = 0
SampleInfo.instance_state = 1
Message: subject      = Review
       subject_id    = 99
       from          = Comic Book Guy
       count         = 0
       text          = Worst. Movie. Ever.
SampleInfo.sample_rank = 0
SampleInfo.instance_state = 1
Message: subject      = Review
       subject_id    = 100
```

Thank you for your attention !!
