INTEGRATION TEST FRAMEWORK FOR G4 DSP

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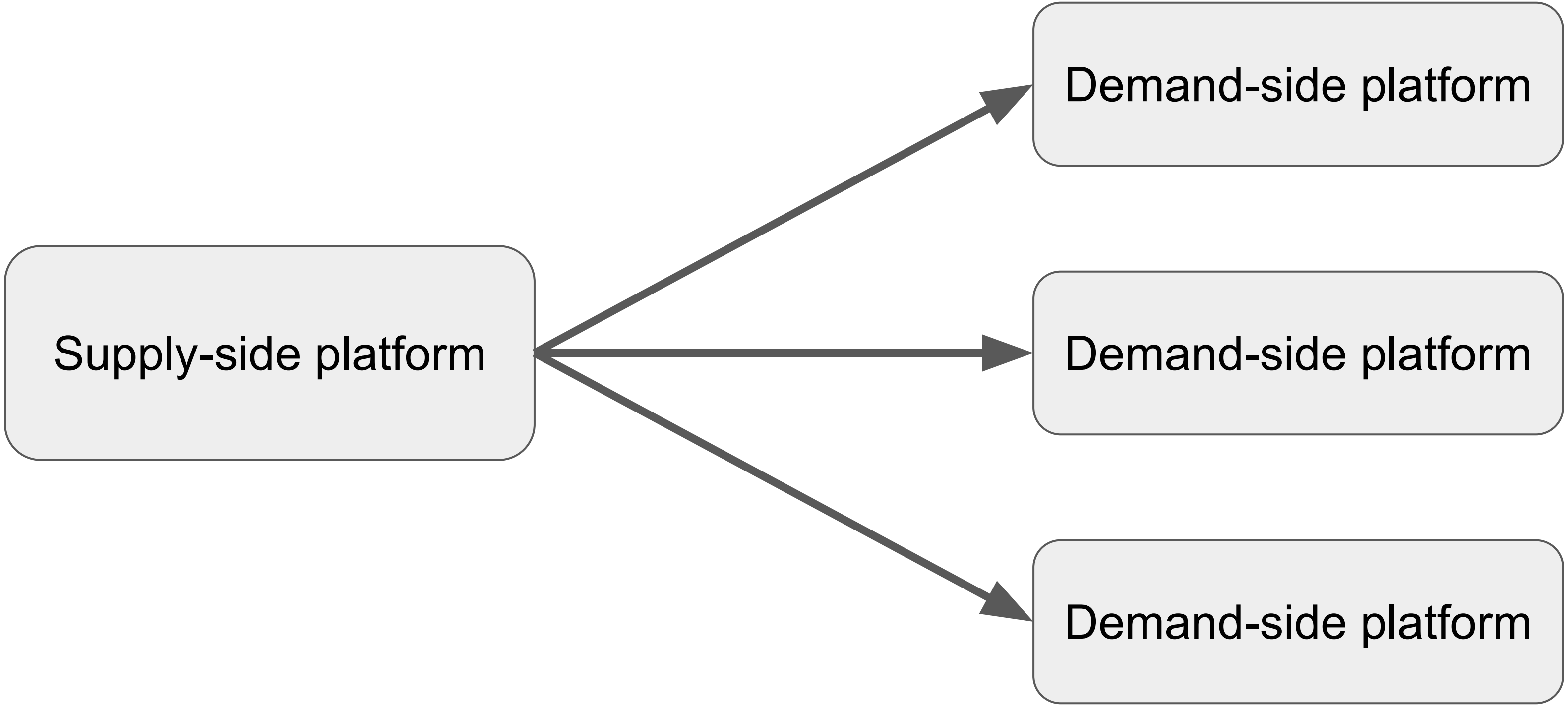
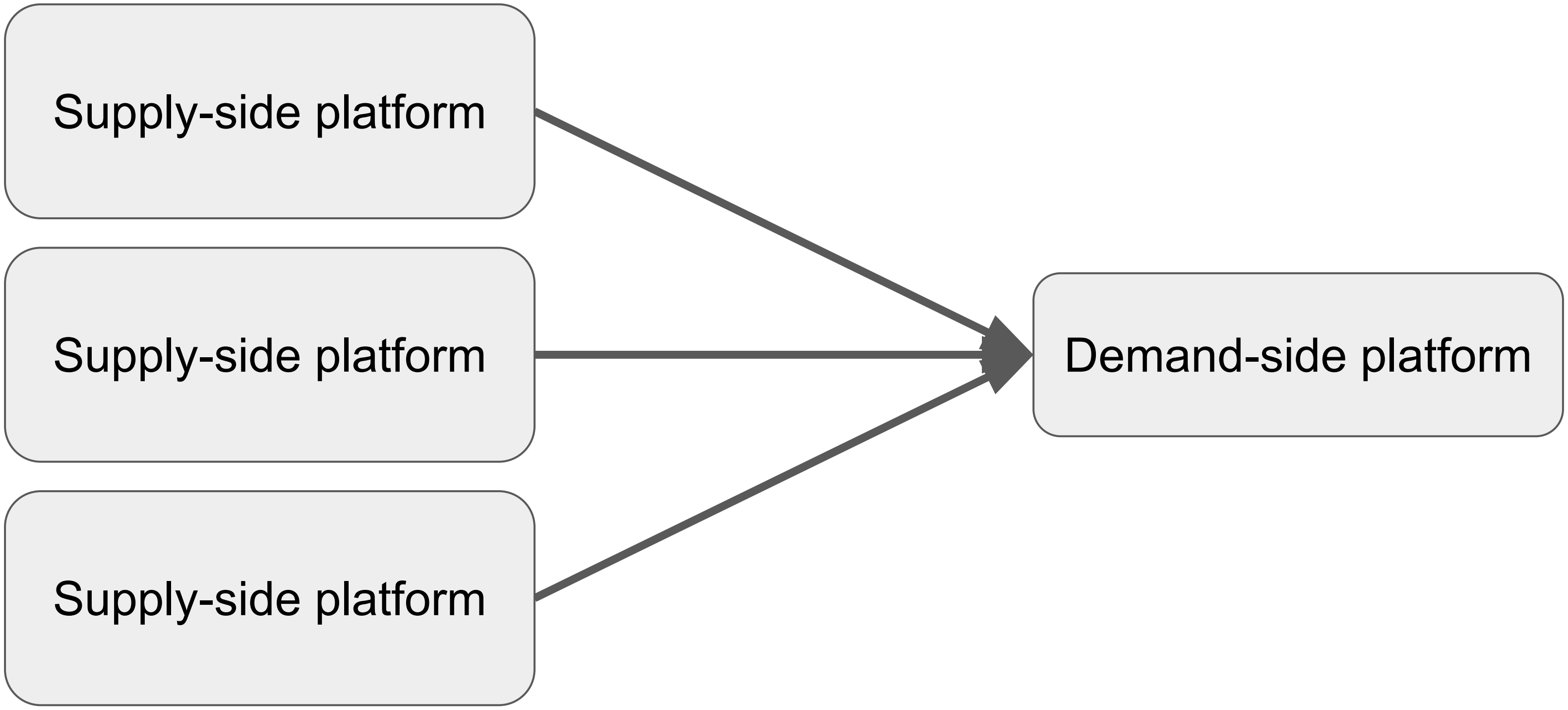


Supply-side platform

Demand-side platform

Demand-side platform

Demand-side platform

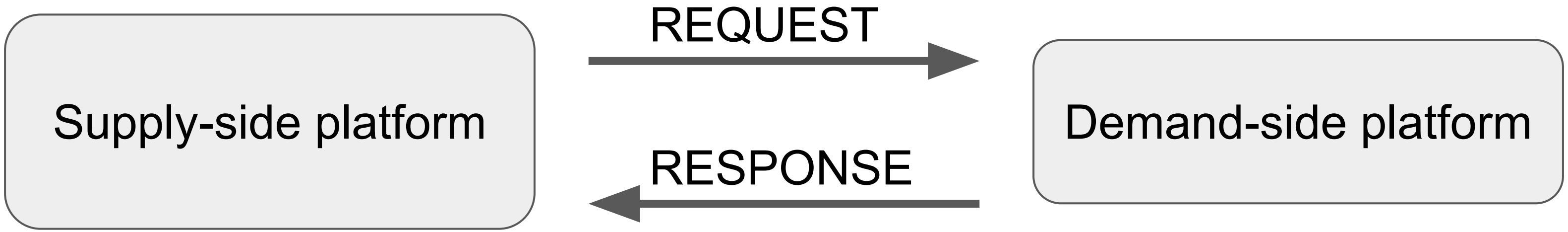


Supply-side platform

Supply-side platform

Supply-side platform

Demand-side platform

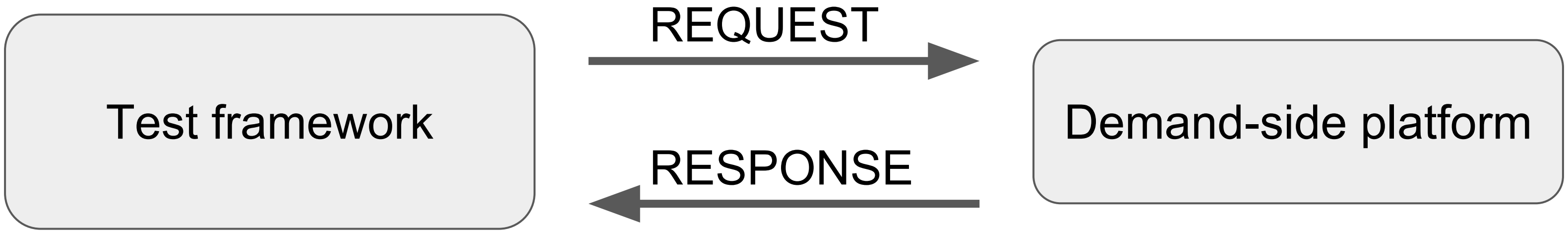


Supply-side platform

REQUEST

RESPONSE

Demand-side platform



Test framework

REQUEST

RESPONSE

Demand-side platform

Test

1. Create request
2. Send request from AppNexus
3. Test response

```
cerateRequest() {
    request = new Request();
}

sendRequest(String sspName) {
    requester = getRequester(sspName);

    response = requester.send(request);
}

testResponse() {
    If (response.isNoBid()) {
        throw new NoBidResponseException(response);
    }
}
```

Test

1. Create request with American IP address
2. Send request from AppNexus
3. Test response

```
cerateRequest() {
    request = new Request();
}

sendRequest(String sspName) {
    requester = getRequester(sspName);

    response = requester.send(request);
}

testResponse() {
    If (response.isNoBid()) {
        throw new NoBidResponseException(response);
    }
}
```

```
cerateRequest() {
        request = new Request();
}

cerateRequestWithIpAddress(String country) {
        request = new Request()
                .setIP(geoIp.getIp(country));
}

sendRequest(String sspName) {
        requester = getRequester(sspName);

        response = requester.send(request);
}

testResponse() {
        If (response.isNoBid()) {
                throw new NoBidResponseException(response);
        }
}
```

Test

1. Create request with Verizon mobile carrier
2. Send request from AppNexus
3. Test response

```
cerateRequest() {
        request = new Request();
}

cerateRequestWithIpAddress(String country) {
        request = new Request()
                .setIP(geoIp.getIp(country));
}

sendRequest(String sspName) {
        requester = getRequester(sspName);

        response = requester.send(request);
}

testResponse() {
        If (response.isNoBid()) {
                throw new NoBidResponseException(response);
        }
}
```

```
cerateRequest() {
        request = new Request();
}

cerateRequestWithIpAddress(String country) {
        request = new Request()
                .setIP(geoIp.getIp(country));
}

cerateRequestWithMobileCarrier(String carrier)) {
        request = new Request()
                .setMobileCarrier(carrier);
}

sendRequest(String sspName) {
        requester = getRequester(sspName);

        response = requester.send(request);
}

testResponse() {
        If (response.isNoBid()) {
                throw new NoBidResponseException(response);
        }
}
```

```
cerateRequest() {
    request = new Request();
}

sendRequest(String sspName) {
    requester = getRequester
(sspName);

    response = requester.send
(request);
}

testResponse() {
    If (response.isNoBid()) {
        throw new
NoBidResponseException(response);
    }
}
```

```
cerateRequestWithIpAddress(String
country) {
    request = new Request()
        .setIP(geoIp.getIp(country));
}

sendRequest(String sspName) {
    requester = getRequester
(sspName);

    response = requester.send
(request);
}

testResponse() {
    If (response.isNoBid()) {
        throw new
NoBidResponseException(response);
    }
}
```

```
cerateRequestWithMobileCarrier(String
carrier)) {
    request = new Request()
        .setMobileCarrier(carrier);
}

sendRequest(String sspName) {
    requester = getRequester
(sspName);

    response = requester.send
(request);
}

testResponse() {
    If (response.isNoBid()) {
        throw new
NoBidResponseException(response);
    }
}
```

Test

1. Create request
2. Send request from AppNexus
3. Test response

```
class RequestCreator {
    Context context;

    RequestCreator(Context context) {
        this.context = context;
    }
}
```

```xml
<dependency>
    <groupId>info.cukes</groupId>
    <artifactId>cucumber-picocontainer</artifactId>
    <version>${dependency.cucmber.version}</version>
</dependency>
```

```
class RequestCreator {
    Context context;

    RequestCreator(Context context) {
        this.context = context;
    }
}
```

```
cerateRequest() {
    request = new Request();

    context.setValue(Context.REQUEST, request);
}

cerateRequestWithIpAddress(String country) {
    request = new Request()
        .setIP(geoIp.getIp(country));

    context.setValue(Context.REQUEST, request);
}

cerateRequestWithMobileCarrier(String carrier)) {
    request = new Request()
        .setMobileCarrier(carrier);

    context.setValue(Field.REQUEST, request);
}
```

```
class RequestSender {
        Context context;

        RequestSender(Context context) {
                this.context = context;
        }
}
```

```
sendRequest(String sspName) {
        request = context.getValue(Context.REQUEST);
        requester = getRequester(sspName);
        response = requester.send(request);

        context.setValue(Context.RESPONSE, response);
}
```

```
class RequestTester {
        Context context;

        RequestTester(Context context) {
                this.context = context;
        }
}
```

```
testResponse() {
    response = context.getValue(Context.RESPONSE);

    If (response.isNoBid()) {
            throw new NoBidResponseException(response);
    }
}
```

```
public class Context {
    public static final Context<Request> REQUEST = new Context<>();
    public static final Context<Response> RESPONSE = new Context<>();

    private final Map<Field, Object> context = new HashMap<>();

    public <Value> Context setValue(final Field<Value> field, Value value) {
        context.put(field, value);

        return this;
    }

    public <Value> Value getValue(final Field<Value> field) {
        return (Value) context.get(field)
    }
}
```

```
cerateRequest() {
        request = new Request();

        context.setValue(Context.REQUEST, request);
}

cerateRequestWithIpAddress(String country) {
        request = new Request()
                .setIP(geoIp.getIp(country));

        context.setValue(Context.REQUEST, request);
}

cerateRequestWithMobileCarrier(String carrier)) {
        request = new Request()
                .setMobileCarrier(carrier);

        context.setValue(Field.REQUEST, request);
}
```

```
sendRequest(String sspName) {
	request = context.getValue(Context.REQUEST);
	requester = getRequester(sspName);
	response = requester.send(request);

	context.setValue(Context.RESPONSE, response);
}
```

```
testResponse() {
        response = context.getValue(Context.RESPONSE);

        If (response.isNoBid()) {
                throw new NoBidResponseException(response);
        }
}
```

```
public class SharedBrowser {
    private static final Browser BROWSER = new Browser();

    static {
        final ShutdownHook shutdownHook = new ShutdownHook(BROWSER);

        Runtime.getRuntime()
            .addShutdownHook(shutdownHook);
    }
}
```

```
public class ShutdownHook extends Thread {
    private final Closeable closeable;

    ShutdownHook(final Closeable closeable) {
        this.closeable = closeable;
    }

    void run() {
        closeable.close();
    }
}
```

Questions?