

# AMIE Introduction

Nathan Tolbert

*L3 Manager, A3M*

*tolbert@illinois.edu*

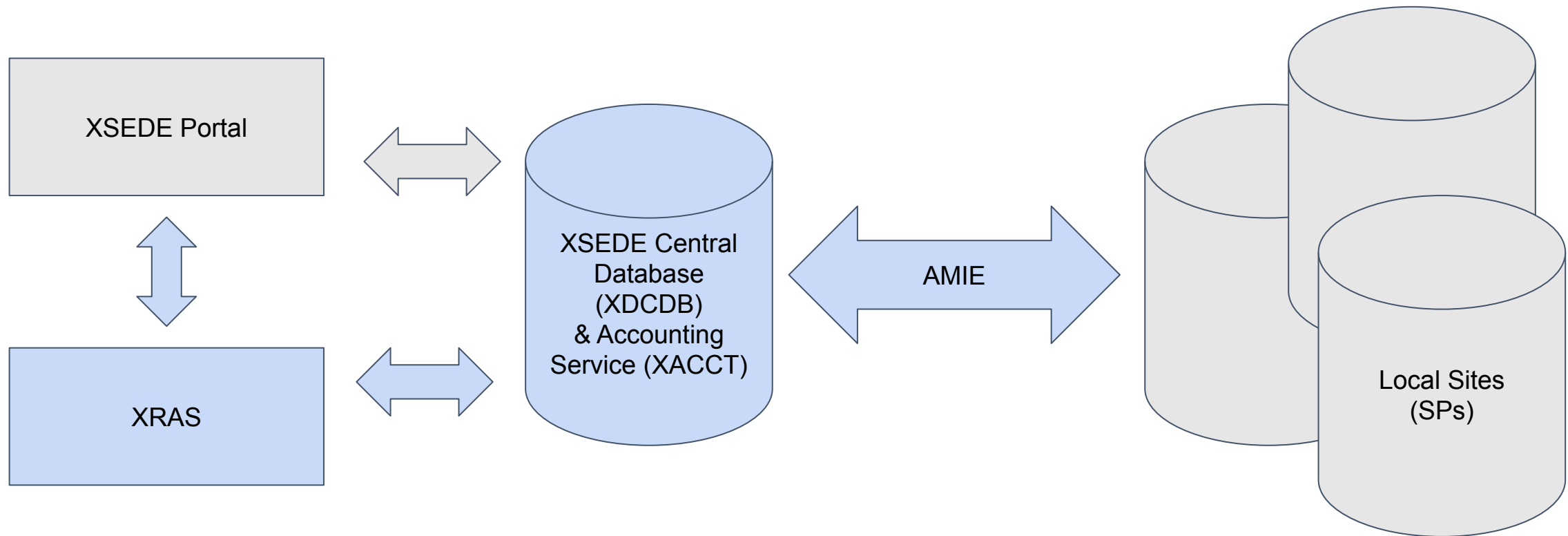
**XSEDE**

Extreme Science and Engineering  
Discovery Environment



Supported by OAC 15-48562.

# XSEDE Allocations, Accounting, and Account Management (A3M)



# AMIE (Account Management Information Exchange)



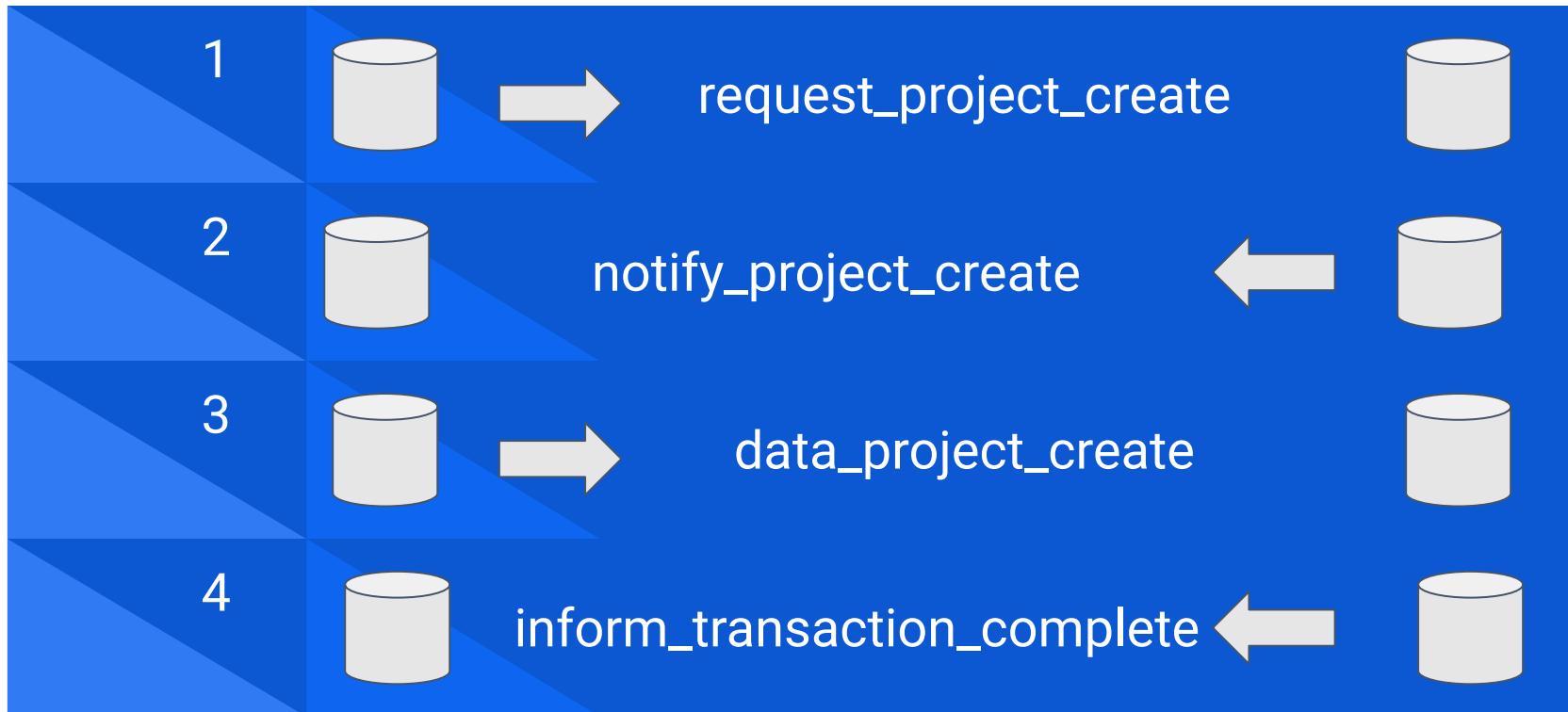
- New projects/allocations sent to SP
- New user logins sent to SP
- Modifications/deactivations for users and/or projects
- (reporting usage)



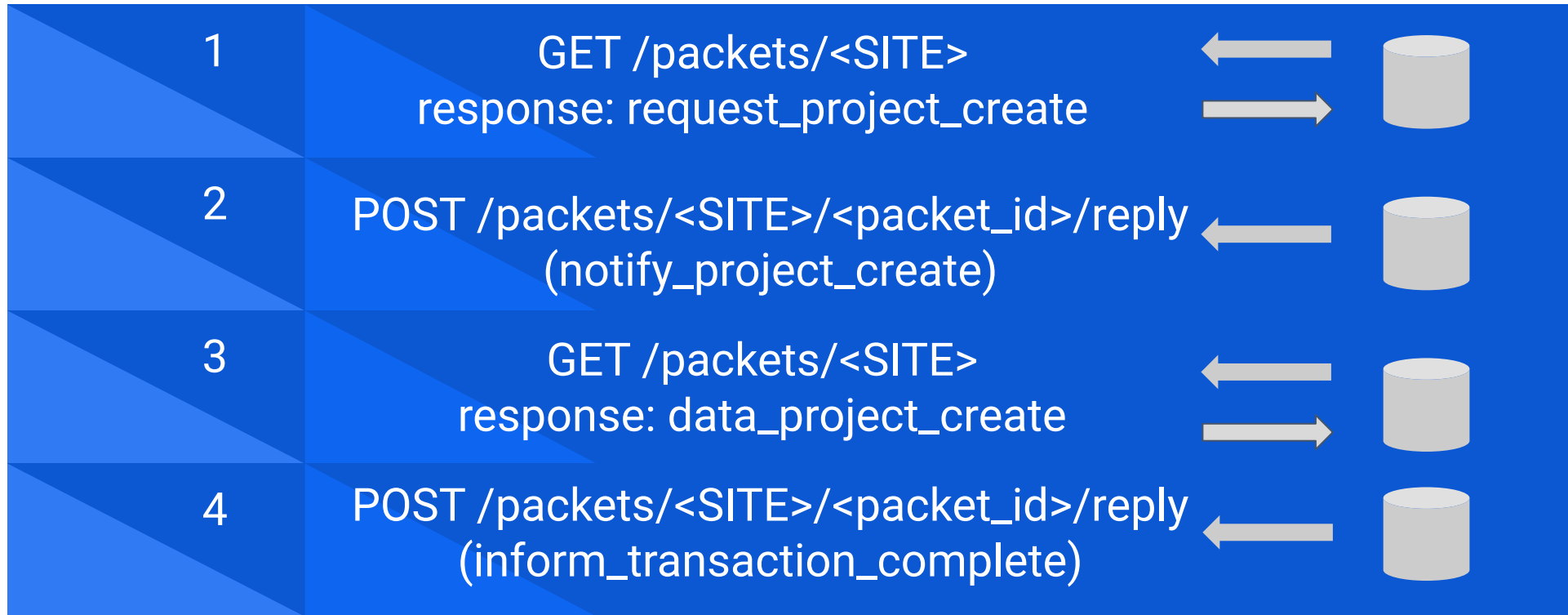
One model, multiple transports

- XML packets over SSH
- XML packets over rabbitMQ
- **New JSON packets over REST-like API**

# Transactions & Packets

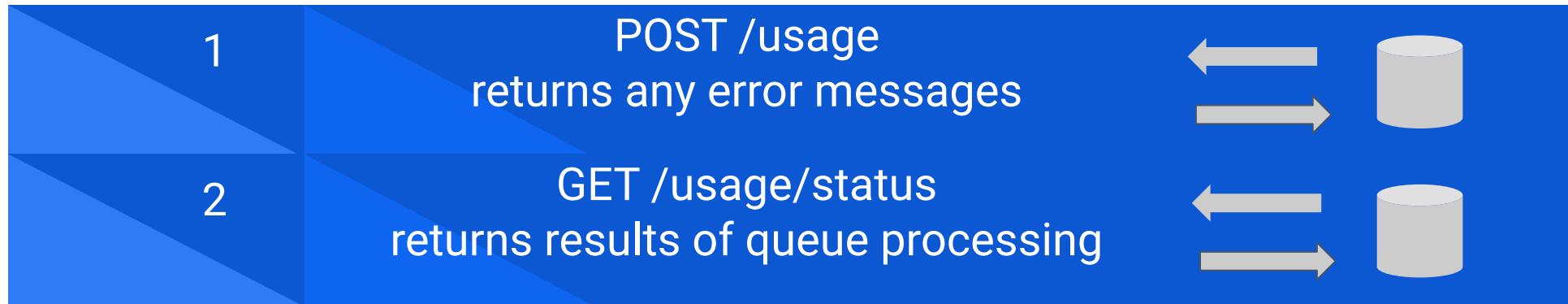


# Transactions & Packets - REST API



# Usage

In new AMIE API, Usage is separated out into a separate API (not actually part of AMIE)



# Setting up AMIE

- Work with A3M:
  - register AMIE API key
  - resources in RDR
- Have your local accounting system ready
- (Preferably, not required): get a copy of the amieclient python library
- Start integration, testing with the AMIE test server
- Move to production, setup cron job to run regularly



# AMIE Client library

```
psc_client = Client(site_name='PSC', api_key='some_secret_key')
packets = psc_client.list_packets()
```

```
for packet in packets:
```

```
    packet_type = packet.packet_type
```

```
    if packet_type == "request_project_create":
```

```
        # Here, you'd go ahead and do what you need to create the project.
```

```
        # SomeInternalSystem.create_project(packet)
```

```
        # Once that's done, send a NotifyProjectCreate packet.
```

```
        npc = packet.reply_to()
```

```
        npc.ProjectID = "123"           # your local project ID
```

```
        npc.PiRemoteSiteLogin = "bob"  # local login of the PI
```

```
        npc.PiPersonID = "12345"      # local person ID for the pi
```

```
    psc_client.send_packet(npc)
```

## **New Project Creation (plus supplements, etc):**

- **-> request\_project\_create**
- **<- notify\_project\_create**
- **-> data\_project\_create**
- **<- inform\_transaction\_complete**

# Common Transaction Flows

## **New User Account Creation:**

- **-> request\_account\_create**
- **<- notify\_account\_create**
- **-> data\_account\_create**
- **<- inform\_transaction\_complete**

### **Project inactivation/reactivation:**

- **-> request\_project\_inactivate**
- **<- notify\_project\_inactivate**
- **-> inform\_transaction\_complete**

# Common Transaction Flows

## **User modification:**

- **-> request\_user\_modify**
- **<- inform\_transaction\_complete**

## Resources and Documentation

- **AMIE API Docs (start here)**
- **Usage API doc**
- **amieclient python library**
- **amieclient docs**
- **Comprehensive historical AMIE docs (includes old protocol)**

Fear not!

**A3M will work with you and provide support for getting this set up.**

[tolbert@illinois.edu](mailto:tolbert@illinois.edu)

[help@xsede.org](mailto:help@xsede.org)