VivaNoodle – Setup Guide

This guide explains how to install VivaNoodle and integrate it with any LTI 1.3–compatible LMS.
Canvas Cloud is used for examples, but the process is the same for Moodle, Blackboard, Brightspace, D2L, Sakai, etc.

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1. Clone & Install

```bash git clone git@github.com:rtreharne/VivaNoodle.git cd VivaNoodle

python3 -m venv .venv source .venv/bin/activate pip install -r requirements.txt ```

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## 2. Migrate Database

```
bash python manage.py migrate
```

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## 3. Generate RSA Keys

```
bash mkdir -p lti_keys openssl genrsa -out lti_keys/private.pem 2048 openssl rsa -in lti_keys/private.pem -pubout -out lti_keys/public.pem
```

Do **not** commit these keys. They are ignored by default.

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4. Create a Django Superuser

```
bash python manage.py createsuperuser
```

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5. Create an LTI 1.3 Developer Key in Your LMS

(Example: Canvas Cloud)

In Canvas:

1. Go to **Admin → Developer Keys**
2. Click **+ Developer Key → LTI Key**

3. Choose **Manual Entry**

Key Settings

Field	Example
Key Name	VivaNoodle
Redirect URIs	https://your-domain.com/launch/
Privacy Level	Public
Owner Email	your@email

LTI Key Configuration

Field	Example
OIDC Login URL	https://your-domain.com/login/
Target Link URI	https://your-domain.com/launch/
JWKs URL	https://your-domain.com/jwks/

After saving, Canvas provides:

- **Client ID**
- **Issuer (iss):** https://canvas.instructure.com
- **Authorization URL:** https://canvas.instructure.com/api/lti/authorize_redirect
- **Platform JWKS URL:** https://canvas.instructure.com/api/lti/security/jwks
- **Deployment ID** (created when you install the app into a course)

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6. Install the Tool in Your LMS

(Canvas example)

1. Go to **Course → Settings → Apps**
2. Click + **App**
3. Choose **By Client ID**
4. Paste the Client ID from the Developer Key
5. Canvas installs the tool and shows you the **Deployment ID**

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7. Create a ToolConfig Entry in VivaNoodle

Visit:

https://your-domain.com/admin/

Go to:

VivaNoodle → Tool Configurations → Add

Enter the values from Canvas:

ToolConfig Field	Example
Issuer	`https://canvas.instructure.com`
Client ID	from Canvas
Deployment ID	from Canvas
Auth Endpoint	`https://canvas.instructure.com/api/lti/authorize_redirect`
Platform JWKS URL	`https://canvas.instructure.com/api/lti/security/jwks`
Name	Canvas Production

Save the configuration.

You may create multiple ToolConfigs for different LMSes or different environments.

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8. Run the Server

```bash
python manage.py runserver 0.0.0.0:8000
```

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9. Launch VivaNoodle From Your LMS

Once installed, VivaNoodle can be launched from:

- Course Navigation
- Modules
- Assignments (if AGS enabled)

The flow:

1. LMS → VivaNoodle `/login/` (OIDC)
2. VivaNoodle redirects back to LMS
3. LMS signs and sends `id_token`
4. VivaNoodle validates it
5. Instructor or student interface loads automatically

Troubleshooting

❌ "No matching ToolConfig"

One of the client/deployment/issuer values does not match.

❌ **"invalid*state*" or "*invalid*nonce"**

Ensure HTTPS and correct redirect URLs.

❌ **JWKS key errors**

Confirm your `/jwks/` endpoint is publicly accessible.

🎓 Credits

- **Original concept: Simon Bell**
- **Design & implementation: Dr. Robert Treharne**