

Swarms Framework Environment Configuration

This guide details the environment variables used in the Swarms framework for configuration and customization of your agent-based applications.

Configuration Setup

Create a `.env`` file in your project's root directory to configure the Swarms framework. This file will contain all necessary environment variables for customizing your agent's behavior, logging, and analytics.

Environment Variables

Core Variables

`WORKSPACE_DIR`

- **Purpose**: Defines the directory where all agent states and execution logs are stored
- **Type**: String (path)
- **Default**: ``./workspace``
- **Example**:

```
```bash
```

```
WORKSPACE_DIR=/path/to/your/workspace
```

```
```
```

- **Usage**:
 - Stores JSON files containing agent states
 - Maintains execution history

- Keeps track of agent interactions
- Preserves conversation logs

`SWARMS_AUTOUPDATE_ON`

- **Purpose**: Controls automatic updates of the Swarms framework
- **Type**: Boolean
- **Default**: `false`
- **Example**:

```
```bash
```

```
SWARMS_AUTOUPDATE_ON=true
```

```
```
```

- **Features**:
 - Automatically updates to the latest stable version
 - Ensures you have the newest features
 - Maintains compatibility with the latest improvements
 - Handles dependency updates
- **Considerations**:
 - Set to `false` if you need version stability
 - Recommended `true` for development environments
 - Consider system requirements for auto-updates
 - May require restart after updates

Telemetry Configuration

`USE_TELEMETRY`

- **Purpose**: Controls whether telemetry data is collected

- **Type**: Boolean

- **Default**: `false`

- **Example**:

```
```bash
```

```
USE_TELEMETRY=true
```

```
```
```

- **Data Collected**:

- Agent performance metrics

- Execution time statistics

- Memory usage

- Error rates

- System health indicators

Analytics Integration

`SWARMS_API_KEY`

- **Purpose**: Authentication key for the Swarms Analytics Suite

- **Type**: String

- **Required**: Yes, for analytics features

- **Example**:

```
```bash
```

```
SWARMS_API_KEY=your_api_key_here
```

```
```
```

- **Features**:

- Real-time agent execution tracking

- Usage analytics

- Performance monitoring
- Cost tracking
- Custom metrics

Getting Started

1. Create a new `.env` file:

```
```bash
touch .env
```
```

2. Add your configuration:

```
```bash
Basic configuration
WORKSPACE_DIR=./my_workspace

Enable auto-updates
SWARMS_AUTOUPDATE_ON=true

Enable telemetry
USE_TELEMETRY=true

Add your Swarms API key
SWARMS_API_KEY=your_api_key_here
```
```

3. Obtain your API key:

- Visit swarms.ai
- Create an account or log in
- Navigate to the API section
- Generate your unique API key

Best Practices

1. **Security**:

- Never commit your `.env` file to version control
- Add `.env` to your `.gitignore` file
- Keep your API keys secure and rotate them periodically

2. **Workspace Organization**:

- Use descriptive workspace directory names
- Implement regular cleanup of old logs
- Monitor workspace size to prevent disk space issues

3. **Telemetry Management**:

- Enable telemetry in development for debugging
- Consider privacy implications in production
- Review collected data periodically

4. **Auto-Update Management**:

- Test updates in development before enabling in production
- Keep backups before enabling auto-updates

- Monitor system resources during updates
- Schedule updates during low-traffic periods

Examples

Basic Development Setup

```
```bash
WORKSPACE_DIR=./dev_workspace
SWARMS_AUTOUPDATE_ON=true
USE_TELEMETRY=true
SWARMS_API_KEY=sk_test_XXXXXXXXXXXX
```
```

Production Setup

```
```bash
WORKSPACE_DIR=/var/log/swarms/prod_workspace
SWARMS_AUTOUPDATE_ON=false
USE_TELEMETRY=true
SWARMS_API_KEY=sk_prod_XXXXXXXXXXXX
```
```

Testing Environment

```
```bash
WORKSPACE_DIR=./test_workspace
SWARMS_AUTOUPDATE_ON=true
USE_TELEMETRY=false
```

SWARMS\_API\_KEY=sk\_test\_XXXXXXXXXXXX

...

## ## Troubleshooting

Common issues and solutions:

### 1. \*\*Workspace Access Issues\*\*:

- Ensure proper file permissions
- Verify the directory exists
- Check disk space availability

### 2. \*\*API Key Problems\*\*:

- Confirm key is properly formatted
- Verify key hasn't expired
- Check for proper environment variable loading

### 3. \*\*Telemetry Issues\*\*:

- Confirm network connectivity
- Verify firewall settings
- Check for proper boolean values

### 4. \*\*Auto-Update Issues\*\*:

- Check internet connectivity
- Verify sufficient disk space
- Ensure proper permissions for updates

- Check system compatibility requirements

## ## Additional Resources

- [Swarms Framework Documentation](<https://github.com/kyegomez/swarms>)
- [Swarms Analytics Dashboard](<https://swarms.ai>)
- [API Reference](<https://swarms.ai/docs/api>)