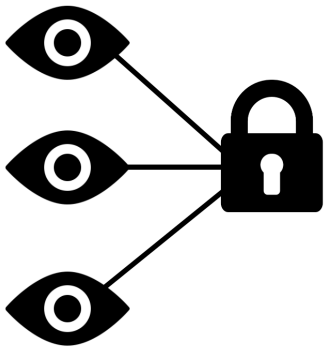
# OPEN MPIC PROJECT UPDATES AND ROADMAP



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## A brief note on the Open MPIC project

The core functionality is implemented in open-mpic-core-python and shared by all Open MPIC deployments. That said, open-mpic-core-python is not useable by itself as it is fully platform agnostic. It presents functions and data structures used to implement Open MPIC but does not handle termination of API calls or calls between the coordinator and the remote perspectives. This gives Open MPIC a highly-flexible implementation model. The Open MPIC Core and be "wrapped" in a variety of deployments that use different technologies to handle API calls and communication between the coordinator and the remote perspectives. The Open MPIC Project currently supports two wrappers:

1. An AWS Lambda wrapper that uses a lambda function to handle API calls (sitting behind an AWS API Gateway to terminate HTTP connections). Calls to other lambda functions using the AWS Boto3 python library to call remote perspectives. This project is the AWS Lambda Python deployment
2. A containerized wrapper that uses REST APIs to handle HTTP calls and uses REST APIs to call remote perspectives from the coordinator. These containers can be deployed in a variety of different environments including Docker compose and Kubernetes. This project is the Open MPIC Containers deployment.

## Functionality

## Currently Implemented Functionality

CA/B Forum Validation Methods implemented in Open MPIC:

1. 3.2.2.4.7 DNS Change,
2. 3.2.2.4.18 Agreed-Upon Change to Website v2,
3. 3.2.2.4.19 Agreed-Upon Change to Website - ACME,
4. 3.2.2.5.1 Agreed-Upon Change to Website [IP],
5. 3.2.2.5.3 Reverse Address Lookup,
6. 3.2.2.5.6 ACME “http-01” method for IP Addresses [IP]
7. 3.2.2.4.13 Email to DNS CAA Contact,
8. 3.2.2.4.14 Email to DNS TXT Contact,
9. 3.2.2.4.16 Phone Contact with DNS TXT Record Phone Contact,
10. 3.2.2.4.17 Phone Contact with DNS CAA Phone Contact

## Planned Functionality

CA/B Forum Validation Methods for which MPIC is required that are not yet implemented in Open MPIC:

1. 3.2.2.4.20 TLS Using ALPN
2. 3.2.2.5.7 ACME “tls-alpn-01” method for IP Addresses

Misc Functionality to be implemented:

1. Support for use of a proxy

Current timeline for this functionality: Feb 1, 2025

Incorporation of MPIC for S/MIME certificates: May 1st, 2025

# Testing

## Currently Implemented testing

1. 99% unit test coverage
2. Automatic unit testing on all pull requests
3. Automatic test coverage check on all pull requests
4. Substantial integration testing

### Planned Testing

1. Full integration test coverage of all methods supported by Open MPIC
2. API spec compliance testing

Current timeline for this functionality: Feb 15, 2025

## Release Tags

We plan to announce the v1 release tag for Open MPIC core after the completion of the remaining testing (currently targeted at Feb 15, 2025).

The main branches of all repos are protected (requiring unit test passing and PR code review) and commits to main are stable.

## Deployment

### Currently Implemented deployments

1. AWS Lambda behind AWS API Gateway (CA/B F compliant, turnkey with deployment scripts)
2. EC2 directly using docker compose (CA/B F compliant, turnkey with deployment scripts)
3. Local docker (Testing only, turnkey)
4. Local K8s (Testing only, turnkey)

Note that deployments that put multiple perspectives on the same host violate the distance requirement and are intended for testing purposes/demonstrating proper configs to use on remote hosts.

# Planned Deployments

1. Upgrade EC2/docker compose deployment to sit behind load balancing for fail over
2. (potential) turnkey scripts for K8s deployment with multiple clusters in different regions and inter-cluster networking
3. (potential) updates to EJBCA for Open MPIC integration

Current timeline for this functionality: Feb 25, 2025

## Ongoing Support

We plan to offer ongoing support for Open MPIC as it is deployed even beyond the timeline stated in this document. Issues/pull requests raised on Github will be addressed in a timely manner to ensure smooth operations of organizations that choose to deploy Open MPIC.