

REQUEST FOR INFORMATION

Dynamically Configurable Modeling Cloud

August 21, 2017

Enabling Technologies Consortium™

Request for Information

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# Introduction

## About Enabling Technologies Consortium™ (ETC)

The Enabling Technologies Consortium™ (ETC) is comprised of pharmaceutical and biotechnology companies collaborating on issues related to pharmaceutical chemistry, manufacturing, and control with the goal of identifying, evaluating, developing, and improving scientific tools and techniques that support the efficient development, and manufacturing of pharmaceuticals. The purpose of this consortium is to identify high-value opportunities to deliver innovative technologies where the business case is compelling and collaboration with the broader external community is required.

## Request for Information

Publication of this Request for Information (RFI) is the first step by ETC to gather information on and solicit interest in collaborating on a Dynamically Configurable Modeling Cloud on a future ETC project (expected 2018). The information collected during the RFI process will be used to inform plans for future ETC projects. As noted below, responses to this RFI should contain only high level discussions of product development efforts and should not contain trade secrets or confidential information. Respondent(s) to this RFI may be invited to submit a proposal to a future Dynamically Configurable Modeling Cloud RFP (expected 2018).

The RFI process will serve to provide ETC members with information on project scope, timeline, and resource requirements in order for ETC to define the 2018 Project Roadmap and allow individual ETC members to meet budget allocation deadlines to support projects in 2018.

## Disclaimer

The contents and information provided in this RFI are meant to provide general information to parties interested in developing a Dynamically Configurable Modeling Cloud. If a collaborative project results from this RFI, the successful respondent will be required to execute an Agreement that will govern the terms of the project. When responding to this RFI, please note the following:

* This RFI is not an offer or a contract
* Proposals submitted in response to this RFI become property of ETC
* Respondents will not be compensated or reimbursed for any costs incurred as part of the RFI process
* Any questions received from potential respondents will be anonymized and made available to all respondents via our website
* All proposals received in response to this RFI will remain confidential within ETC and not shared with other respondents
* Responses to this RFI should contain only high level discussions of product development efforts and should not contain trade secrets or confidential information
* Responses to this RFI may be used by ETC to inform plans for future ETC projects and associated Requests for Proposal
* ETC is not obligated to contract for any of the products and services described in this RFI
* ETC reserves the right to:
  + Accept or reject any or all responses to this RFI
  + Waive any anomalies in proposals
  + Negotiate with any or all respondents to this RFI
  + Modify or cancel this RFI at any time

## RFI Contact Information

All questions and inquiries regarding this RFI should be directed to:

Ms. Alexis Myers

Project Coordinator

ETC Secretariat

c/o Drinker Biddle & Reath, LLP

1500 K St NW

Washington DC, 20005-1209

(202) 842-8800

[info@etconsortium.org](mailto:info@etconsortium.org)

<http://www.etconsortium.org/>

## Anticipated Time Frames for Evaluation and Selection Process

Issue RFI August 21, 2017

Questions on RFI due September 5, 2017

Responses to RFI due September 18, 2017

Follow-up Questionnaire circulated October 2, 2017

Initial 2018 ETC Project Roadmap defined Oct. 2017

Notification of Next Steps Oct. / Nov. 2017

*The initial 2018 ETC Project Roadmap will be defined at the ETC Board of Directors meeting in October 2017. Following that meeting, all respondents will be informed of next steps related to the Dynamically Configurable Modeling Cloud Project.*

***Please submit your response electronically to the above address. Responses received after September 18, 2017*** ***will not benefit from full consideration and may be excluded from the selection process.***

# Project Information

## Possible Project Sponsors

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| AbbVie, Amgen, Bristol-Myers Squibb |

## Description

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| The ETC is seeking a collaboration partner to provide accelerated access to flexibly deployed computing resources to meet member companies’ needs and enhance collaboration.  Moving computationally heavy scientific simulation to cloud computing platforms like Amazon Web Services, Google Cloud, Microsoft Azure, and others is an increasing trend in the industry as a more efficient alternative to expanding in-house high performance computing. One of the biggest challenges with such platforms is the migration of software licenses either to the cloud or to some mechanism for a cloud platform to see the license server behind a company’s firewall. The goal of this project is to create an elastic cloud computing facility that has a pay-as-you-go license structure for multiple stipulated software packages and large arrays of computing resources able to accelerate the results from simulations on demand.  This project will be conducted as a collaboration between ETC and the selected vendor. Throughout the duration of this project, ETC and the vendor will work together to develop the desired elastic cloud modeling/computing platform. ETC will supply the vendor with a comprehensive list of requirements, modeling subject matter expertise, and funding to support this project. The vendor will supply the resources and expertise necessary to design, prototype, and ultimately produce the elastic cloud modeling platform. Upon completion of this project, it is anticipated that the elastic cloud modeling platform will be realized and made available to the scientific community as commercialized product offering of the participating vendor. |

## Dynamically Configurable Modeling Cloud Requirements

### Necessary Software Requirements

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| Elements of the design:   * Security protocol acceptable to all member companies * Software stipulated by member companies * Computing capability which can flexibly provisioned * Cost structure which has a component for maintenance as well as usage charge * Storage capability of individual members as an individually defined space * Separate space to be configured in situations for shared use * Backup of system * Tracking of access and usage   Explanation: Please see the Appendix for more specific information  **Elements of the elastic cloud engineering simulation platform:**  The cloud based platform should allow login-based access. Upon login, each company will have its own project directory with certain specified data storage capacity. It is required that this storage is secure and highly scalable. Each user of said company will have his own user directory and can access his parent company project directory; however, a user from company A has no access to the data of company B.  A user should be able to spin up a high performance computing (HPC) server with desired configurations of CPU/GPU, memory, storage and networking capacity with the desired OS platform and scientific software. It is desired that the license structure of the software is pay-as-you-go. Similarly, the price of on-demand HPC should be based on usage. It is desired that there is provision for saving a preconfigured HPC image template for starting new instances. This platform should contain all the stipulated software by member companies with pay-as-you-go license model.  The downtime of such platform should be minimal and pre-informed. The access to such system should be 24/7 and a user should be able to access such platform from any device with internet service (smartphone, tablet, laptop and desktop). The entire system should have a backup and a disaster recovery system in place. It is desired that a tracking of access and usage of the platform is in place. |

### Optional Software Requirements

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| **Sharing of models**  In addition to features listed in Section 2.3.1, the access model should be configurable and scalable so that companies may create a space and grant access to other companies and/or external partners for specific models and/or data sets for collaboration. The access rights and access instances need to be traceable. There may be a point system based on contribution to determine permission to access which the system will account for. |

### Availability Requirements

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| * Facility should be available through the web 24/7. * Down time for maintenance should be minimal and specified. * A disaster recovery plan needs to be in place.   An online platform with desired features as listed in Section 2.3.1 should be available within 6 months of beginning project execution. An additional 6 months may be required for implementing features desired in Section 2.3.2. |

### Licensing Requirements for Commercialized Product

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| The facility will have standalone capability. The facility license structure permits use of any/all resources by members according to their facility subscription.  No external license or advanced computing capability is required of members other than internet access from an ordinary personal computer. |

# Criteria for Evaluation

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| The ETC will evaluate the responses to this RFI based on the respondent’s ability to:   * Provide response with desire to participate in collaboration. * Meet the functional, performance, and technical requirements described in this RFI as evidenced by the RFI response and presentations made to ETC. * Provide a cost-effective solution that is compatible with the goals of the project. * Demonstrate domain expertise and an ability to work collaboratively with the ETC in development of the Dynamically Configurable Modeling Cloud. * Provide a superior level of customer service and technical support, both pre-installation and post-installation to clients. * Discuss potential partnerships and current development efforts that show similarities to this request. * Provide any additional capabilities that may differentiate them from other potential collaborators.   The ETC will not be able to provide individual feedback to RFI respondents. |

# Respondent Profile *(to be completed by RFI respondent)*

Please provide information to the following:

## Company/Organization Information

|  |  |
| --- | --- |
| Company/Organization Name |  |
| Address |  |
| City |  |
| State |  |
| Country |  |
| Zip Code |  |
| Website |  |

## Primary Contact Person

|  |  |
| --- | --- |
| Name |  |
| Title |  |
| Email address |  |
| Phone Number |  |

## Company/Organization Overview

Provide a brief overview of your company/organization including number of years in business, number of employees, nature of business, description of clients, and related products developed and commercialized to date.

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## Parent Corporation and/or Subsidiaries

Identify any parent corporation and or subsidiaries, if appropriate.

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## Summary of Expertise

Give a brief description of your company/organization’s expertise in the area/field related to this RFI. Include any experience working on projects with Consortia/Associations.

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## Standards Certifications

List any certifications currently held, including date received, duration, and renewal date.

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## Goals and Strategic Vision

Provide a summary of your company/organization’s short term and long term goals and strategic vision.

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## Miscellaneous

Please enter your response to each requirement using the guidelines provided in the tables below. If additional documentation or schematics are required to respond to a particular question, please answer the question as succinctly and accurately as possible and reference supplemental attachments.

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# Company/Organization Response to RFI (*to be completed by RFI respondent)*

## Proposal

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## Functional Requirements & Specifications

Refer to the following Functional Requirements and Specifications checklist in Section 6.2 (Appendix) that summarizes the collective requirements and specifications by the sponsors of the project.

Based upon your proposed approach to deliver a solution, provide a response to each checklist item along with comments and assign one of the following Codes to each item:

|  |  |
| --- | --- |
| A | Current capability of existing product |
| B | Able to add capability as requested |
| C | Able to add capability with modification to ETC request |
| D | Unable to add capability |

| Requirement | Code | Respondent Comments |
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## Estimated Timeline

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## Estimated Project Cost

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# Appendix (additional detail*)*

## Software

The sponsors have selected the following list of desirable software as a starting point. Please indicate the expected current and future availability for the system. Please add any suggested software that can be made available at launch or launch +1 year.



## Security

The following is a summary of the general security requirements based on interviews with the respective IT stakeholders from possible ETC sponsors listed in Section 2.1. The specific security requirements in the Dynamically Configurable Cloud will be determined during the project scoping, determined in collaboration with IT stakeholders from ETC sponsor and vendor selected.

The Dynamically Configurable Cloud should:

• Be secure from outside intrusion

• Have data backup for full recovery in the event of a disaster

• Establish a secure link to the client network for either in house or remote users (e.g. encrypted in transit and encrypted at rest)

• Keep each client’s workspace separate from one another

• Log access and provide a history of access and use

• Allow users to configure secure access for any other parties (e.g. academic collaborators, CRO, Health Authorities) provided they have been cleared by the client security screen and credentialing procedures

• Allow users to configure sharing of a subset of data or models with other client companies in a separate space created for the purpose

* Provide for periodic audit and review of system security settings and access logs by the client company (e.g. a quarterly basis for some clients)