Electronic Research Administration
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NIH System to System (S2S) "Client" Transactions Guide

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INTRODUCTION

Background

The System-to-System (S2S) interface provides the means for external systems to interact via direct requests to the NIH eRA Exchange system to perform various business functions. These business functions vary in purpose from obtaining Funding Opportunity Announcement (FOA) information to querying the status of grant applications, retrieving validation error/warning messages resulting from grant application processing, and verifying person information details.

All services are offered as standards based web services and published via WSDL, allowing client stubs to be auto generated.

This document provides software developers with transaction level details for the eRA Exchange System-to-System transactions. The aim is to supplement the WSDL definitions that themselves provide structural layout and content level data typing information with field level content descriptions. Also typical usage patterns are described. Brief details of the interaction processing are provided along with details of the incoming request messages and outgoing responses.

The security considerations and requirements that ensure that response information is only returned to requesters who are authorized to receive that information are also outlined.

In summary this guide is intended to assist external organizations with the creation and processing of the transactions, their formatting and content, for the S2S exchanges currently implemented and available for use. This document is a supplemental document from, and a subset of, the formal internal NIH requirements documentation.

Relationship to NIH eRA Commons system

The NIH eRA Commons web site allows external users to enter and manage their profile information and track grant applications in the Commons. The system-to-system web services provide alternate means to get profile, status, and other information directly via system-to-system transactions.

Business Process Operations

The following table shows the current business process operations supported.

Each operation is only permitted if all the security validations are passed (see following section for detailed security handling). This includes transport level checking (valid certificate uniquely identifying external party's system); process level authorization checks, and valid association between the requestor and the DUNS ID associated with the information exchange (permitted to access that owner organizations information). The transactions are not constrained to only information associated with eSubmission data, so information may have originated from previous paper or online web entry processing. Each request is followed by a matching response transaction, or an error transaction. Within response transactions the mandatory elements could be present but as empty tags if no corresponding data is found in the database.

The operations available to external users are organized into three separate services:

- Submission Validation Service (SVS): Provides operations to validate a multi-project application submission or a single project. SVS also provides operations to validate specified components within a multi-project application submission against NIH business rules.

- Submission Agency Data Service (SADS): Provides operations for retrieving NIH data supporting electronic submissions.

- SIL: Provides operations to generate PDF images for Face Page, Budget, Grant Image etc.

- RFA PA service : Provides operation for inserting the FOA information

Service	Operation	Description
Submission Validation Service (SVS)	Validate Application	Validates an application against agency business rules. Can be used run validations pre-submission to Grants.gov
Submission Validation Service (SVS)	Validate Component	Validates an application against agency business rules. Currently only applies for multi-project applications.
Submission Agency Data Service (SADS)	Application Status Request	Request of grant application status. Requestor provides the Grant application reference number and must have permission to access that organizations application.
Submission Agency Data Service (SADS)	Application validation messages request	Allows the receipt of agency validation error and/or warning messages resulting from the processing of an electronic grant application submitted to Grants.gov. Request contains either the Grants.gov tracking number or the NIH accession number and requestor must have permission to the application. The response contains a list of agency error and/or warning messages that resulted from processing the grant application.
Submission Agency Data Service (SADS)	Person Information Request	Request of Commons User Account information based on the Account ID value; returns person, degree, address and affiliation information. Requestor must have permission to access accounts for the associated organization. Response contains information supported by the transaction schema and on file.
Submission Agency Data Service (SADS)	Person Information with UEI Request	Request of Commons User Account information based on the Account ID value; returns person, degree, address, affiliation information and UEI. Requestor must have permission to access accounts for the associated organization. Response contains information supported by the transaction schema and on file.
Submission Agency Data Service (SADS)	Organization Information Request	Provide information regarding a specific organization.

Submission Agency Data Service (SADS)	Organization Information Request By UEI	Provide information regarding a specific organization by UEI
Submission Agency Data Service (SADS)	Previous Submission Request	Provide information for a previous submission that matches the current submission.
Submission Agency Data Service (SADS)	Prior Grant Request	Provide information for a prior grant that matched the current submission.
Submission Agency Data Service (SADS)	Prior Grant with UEI Request	Provide information for a prior grant with UEI that matched the current submission.
Submission Agency Data Service (SADS)	FOA Information Request	Provide information regarding a specific opportunity.
Submission Agency Data Service (SADS)	Stem Cell Line Status Request	Provide indicators whether identified stem cell lines are valid.
Submission Agency Data Service (SADS)	Person Info with Employment Request	Request of Commons User Account information based on the Account ID value; returns person, degree, address, employments and affiliation information. Requestor must have permission to access accounts for the associated organization. Response contains information supported by the transaction schema and on file.
Submission Agency Data Service (SADS)	Person Info with Employment with UEI Request	Request of Commons User Account information based on the Account ID value; returns person, degree, address, employments, affiliation information, and UEI. Requestor must have permission to access accounts for the associated organization. Response contains information supported by the transaction schema and on file.
Submission Agency Data Service (SADS)	Credential Request	Request for Commons User ID based on the last name and email address of a person. Returns the list of User IDs that match the last name and email in commons. Requestor must have permission to access information for the

		person whose credentials are being requested for the associated organization.
Submission Agency Data Service (SADS)	SAM Org Info Request	Request for SAM registration details.
Submission Agency Data Service (SADS)	SAM Org Info by UEI Request	Request for SAM registration details by UEI
Submission Image Service (SIL)	Generate Grant Image	Generates Grant Image for Single and Complex Grant Applications and expects the PDF attachments being sent as Streams
Submission Image Service (SIL)	Generate Component Image	Generates Image for a component of a Complex Grant Application and expects PDF attachments being sent as Streams
Submission Image Service (SIL)	Generate Form Image	Generates Image for a Form of either a Single or Complex Grant Application and expects PDF attachments being sent as Streams
Submission Image Service (SIL)	Generate Clinical Trials Form Image	Generates Image for a filled in Clinical Trial Forms PDF and expects PDF attachment being sent as Streams
RFA PA service (XCH)	Process Rfa Pa Notice	Inserts the FOA information into RFA_PA_NOTICES_T, RFA_PA_ACTIVITIES_T, RFA_PA_ICDS_T and RFA_PA_COMPONENTS_T
Submission Agency Data Service (SADS)	Regenerate Grant Image for LRP application	Regenerates Grant Image for a LRP application based on the Appl Id

Security Considerations

Each request contains the DUNS organization number associated with the data requested. The DUNS number must be registered and associated with the digital certificate used to make the request. When a mismatch occurs between data requested and authorized, the failed attempt is recorded and may be construed as an attempt to access un-authorized information. The partner is responsible for acquiring and setting up their own digital certificate for use with SSL communications.

The submitting organization is given access to all applications, grants and person data within that organization.

However for calling SIL Operations, there is no restriction to use a different certificate for different organization. The trading partner can register themselves in COMMONS, obtain a certificate and register that certificate with eRA and assign necessary roles to access SIL operations. AMS (account management services) application can be used for this purpose..

The following table summarizes the Roles necessary to access each of the services.

Service Name	Role	Role Context
Submission Validation Service	SVS_APPLICANT_DATA_SERV	Institution
Submission Agency Data Service	APPLICANT_RETRIEVAL_DATA_SERV	Institution
Submission Image Service	SERVICE_PROVIDER_ROLE	Global
Rfa Pa Service	APPLICANT_RFAPA_SERV	Global

Transactions and Field Level Details

Validate Application

VALIDATE APPLICATION REQUEST MESSAGE (incoming)		
FIELD	**DESCRIPTION**	**VALIDATION**
Grant Application XML	The XML for the submission	Must conform to the opportunity schema
Attachment Meta Data:	Meta data for attachments, include document type, page count and size Note: See *Appendix A: Attachment Meta Data Notes*	Must contain meta data for each attachment referenced in the Grant Application XML
File name	File name	
Mime Type	Mime Type	
File Location	File Location	
Size in Bytes	Size in Bytes	
Page Count	Page Count	
Number of Lines	Number of Lines	Some attachments have validation to be under certain number of lines.

VALIDATE APPLICATION REQUEST MESSAGE (incoming)		
FIELD	**DESCRIPTION**	**VALIDATION**
Is Resizing Required	Is Resizing Required	
Is Encrypted Attachment	Is Encrypted Attachment	
Is Password Protected	Is Password Protected	
Is Secure	Is Secure	
Pdf Error	Pdf Error	
Is XFA PDF	Is XFA PDF	Currently eRA does not support XFA (XML Forms Architecture) forms in PDF attachments.

VALIDATE APPLICATION RESPONSE MESSAGE (outgoing)	
Data Element	**Description**
Validation Messages:	Messages repeated for each error/warning
Sub Application Group ID	This identifies Component Type, currently only applicable for multi-project applications. (E.g., Overall, Core, Project, etc.)
Sub Application ID	This identifies Component Identifier, a unique identifier for component types, currently only applicable for multi-project applications. Expected format: 3 digit unique number (unique for the application) and the SubApplicationGroupId (component type) separated by a dash (E.g., 328-Core). Note: See Appendix B: Sub Application ID Sample
Message Rule Number	The rule number associated with the message
Message Severity	E (Error) or W (Warning)
Message Text	Validation message text
Message ID	A unique identifier for the message
Form Name	Form name where validation is applicable

Validate Component

VALIDATE COMPONENT REQUEST MESSAGE (incoming)		
FIELD	**DESCRIPTION**	**VALIDATION**
Grant Application XML	The XML for the submission	Must conform to the opportunity schema

VALIDATE COMPONENT REQUEST MESSAGE (incoming)		
FIELD	**DESCRIPTION**	**VALIDATION**
Attachment Meta Data:	Meta data for attachments, include document type, page count and size Note: See *Appendix A: Attachment Meta Data Notes*	Must contain meta data for each attachment referenced in the Grant Application XML
File name	File name	
Mime Type	Mime Type	
File Location	File Location	
Size in Bytes	Size in Bytes	
Page Count	Page Count	
Number of Lines	Number of Lines	Some attachments have validation to be under certain number of lines.
Is Resizing Required	Is Resizing Required	
Is Encrypted Attachment	Is Encrypted Attachment	
Is Password Protected	Is Password Protected	
Is Secure	Is Secure	
Pdf Error	Pdf Error	
Is XFA PDF	Is XFA PDF	Currently eRA does not support XFA (XML Forms Architecture) forms in PDF attachments.
Opportunity ID	Opportunity ID	

VALIDATE COMPONENT RESPONSE MESSAGE (outgoing)	
Data Element	**Description**
Validation Messages:	Messages repeated for each error/warning
Sub Application Group ID	This identifies Component Type, currently only applicable for multi-project applications. (E.g., Overall, Core, Project, etc.)

VALIDATE COMPONENT RESPONSE MESSAGE (outgoing)	
Data Element	**Description**
Validation Messages:	Messages repeated for each error/warning
Sub Application ID	This identifies Component Identifier, a unique identifier for component types, currently only applicable for multi-project applications. Note: Though SVS will simply return the Sub Application ID that is specified in the XML, upon submission NIH expects the following format: 3 digit unique number (unique for the application) and the SubApplicationGroupId (component type) separated by a dash (E.g., 328-Core). See *Appendix B: Sub Application ID Sample*
Message Rule Number	The rule number associated with the message
Message Severity	E (Error) or W (Warning)
Message Text	Validation message text
Message ID	A unique identifier for the message
Form Name	Form name where validation is applicable

Grant Status Request

APPLICATION STATUS REQUEST MESSAGE (incoming)		
FIELD (Tag)	**DESCRIPTION**	**VALIDATION**
Tracking Number (trackingNumber)	Grants.gov tracking number of grant application (E.g., GRANT12345678)	Optional
Accession Number (accessionNumber)	NIH Accession Number (E.g., 1234567) that has been reserved for the application package	Optional
Project Title (projectTitle)	Project Title of grant application	Optional
Grant Number (grantNumber)	All components of the grant number. Grant Number must be supplied as a series of components, some required and some not. The series of components shown below comprise the full grant number specification:	Grant Number itself (as a whole) is Optional. However, if supplied, certain components cannot be blank. These are indicated as such below.
Grant Number:	First character of the grant number.	Must be a digit (1..9). Cannot be blank.

APPLICATION STATUS REQUEST MESSAGE (incoming)		
FIELD (Tag)	**DESCRIPTION**	**VALIDATION**
Application Type (applicationTypeCode)		
Grant Number: Activity Code (activityCode)	Bytes 2-4 of the grant number, i.e. "R01"	Alphanumeric. Cannot be blank.
Grant Number: Administering PHS Organization (PHSOrgCode)	Bytes 5-6 of the grant number, i.e. "MH"	Alphabetic. Cannot be blank.
Grant Number: Serial Number (serialNumber)	Bytes 7-12 of the grant number, i.e. 000123	Numeric. Cannot be blank.
Grant Number: Support Year (supportYear)	Bytes 14-15 of the grant number (immediately following the dash)	Numeric. Cannot be blank.
Grant Number: Suffix	Bytes 16-19 of the grant number.	Alphanumeric. Blanks are allowed.

Notes:

This status request is designed to retrieve a single year of a data.

At least one identifier needs to be provided. The identifiers and their order of precedence are:
> Accession Number
> Tracking Number
> Grant Number
> Project Title

If more than one identifier is supplied, the first based on the precedence indicated above is used. There is no consistency check within identifiers. The application identified must be one that was previously electronically submitted by the trading partner for the submitting organization.

APPLICATION STATUS RESPONSE MESSAGE (outgoing)	
Data Element (Tag)	**Description**
E-Submission Status (ESubmissionStatus)	A status code indicating the state of the message in the electronic receipt process before functional processing by NIH users. o Grant application downloaded in the exchange o Grant application successfully validated by the exchange o Grant application failed format validation o Grant application successfully loaded in eRA database

APPLICATION STATUS RESPONSE MESSAGE (outgoing)	
Data Element (Tag)	**Description**
	o Grant application failed content validation o E-application submission complete: Application in process
E-Submission status date (ESubmissionStatusDate)	Date of the latest E-Submission Status, above.
Grant status (grantStatus)	Grant application status post intake. This is the offical grant status throughout the life cycle of the application and grant
Grant status date (grantStatusDate)	Date of the latest Grant Status, above.
Grant Number (grantNumber)	All components of the grant number. The Grant Number (E.g., 2R01MH000123-01S1) must be supplied as a series of components. The series of components shown below comprise the full grant number specification. Please note that any or all of these components may be blank, since the assignment of grant number occurs *after* application receipt, and might be at any stage of completion when the status request is received.
Grant Number: Application Type (applicationTypeCode)	First character of the grant number, i.e. "2"
Grant Number: Activity Code (activityCode)	Bytes 2-4 of the grant number, i.e. "R01"
Grant Number: Administering PHS Organization (PHSOrgCode)	Bytes 5-6 of the grant number, i.e. "MH"
Grant Number: Serial Number	Bytes 7-12 of the grant number, i.e. 000123
Grant Number: Support Year (supportYear)	Bytes 14-15 of the grant number (immediately following the dash), i.e "01"
Grant Number: Suffix	Bytes 16-19 of the grant number, i.e. "S1"
Grant title (projectTitle)	Project title
Accession Number (accessionNumber)	NIH internal key assigned before the grant number
Submitter grant application identifier	Submitter internal id for the application
Application Receipt Date (proposalReceiptDate)	Date the application was successfully received by NIH.
SRO Contact	Scientific Review Administrator contact information
SRO Name (name)	First, last name of Scientific Review Administrator (SRO)
SRO Phone Number (phone)	Phone number for SRO contact
SRO E-Mail (email)	Email for SRO contact

APPLICATION STATUS RESPONSE MESSAGE (outgoing)	
Data Element (Tag)	**Description**
IRG Assignment (IRGAssignment)	Identifies Integrated Review Group (IRG) to which application has been assigned. (E.g., ZNS1)
Study Section Meeting Date	Date on which review study section met / will meet.
Study Section Meeting Location	Location of study section review meeting
Study Section Roster	List of members who serve on the assigned study section.
Council Meeting Date	Identifies the council round assigned to this application (year and month).
GMS Contact (GMSContact)	Grants Management Specialist contact information
GMS Name (name)	Grants Management Specialist name
GMS Phone (phone)	Grants Management Specialist phone number
GMS E-Mail (email)	Grants Management Specialist Email
PO Contact (POContact)	Project Official Contact information
PO Name (name)	Program Offical Name
PO Phone (phone)	Program Offical Phone Number
PO E-mail (email)	Program Offical Email
Advisory Council Meeting Date	Date of council meeting
Advisory Council Meeting Location	Location of council meeting

Application Validation Messages Request

APPLICATION VALIDATION MESSAGES REQUEST MESSAGE (incoming)		
FIELD (Tag)	**DESCRIPTION**	**VALIDATION**
Tracking Number (trackingNumber)	Grants.gov tracking number of grant application (E.g., GRANT12345678)	Optional
Accession Number (accessionNumber)	NIH Accession Number that has been reserved for the application package (E.g., 1234567)	Optional

Notes:

At least one identifier needs to be provided. The identifiers and their order of precedence are:

      Accession Number

      Tracking Number

If more than one identifier is supplied, the first based on the precedence indicated above is used. There is no consistency check within identifiers. The application identified must be one that was previously electronically submitted by the trading partner for the submitting organization.

APPLICATION VALIDATION MESSAGES RESPONSE MESSAGE (outgoing)	
Data Element (Tag)	**Description**
Message Location (componentID, formName)	Identifies component and form that generated message. Currently only applicable for multi-project applications. Will be empty for single project applications. (E.g., 661-Core, RR_OtherProjectInfo)
Message Severity (severity)	E (Error) or W (Warning)
Message Text (messageText)	Validation message text
Message Rule Number (ruleNum)	The rule number associated with the message (E.g., 004.22.1)

Person Information Request

PERSON INFORMATION REQUEST MESSAGE (incoming)		
FIELD (Tag)	**DESCRIPTION**	**VALIDATION**
Organization identifier (dunsID)	The identifier of the organization about which the information is requested. This identifier is the DUNS Number.	Must be serviced by the certificate associated with the caller
COMMONS User ID (userID)	The COMMONS user id of the person the information is requested for	The person must be affiliated with the organization for which the information is requested If not, display the following message: There is no Commons Username <Commons User ID> associated with the institution identified as DUNS < Organization Identifier> Mandatory field

PERSON INFORMATION RESPONSE MESSAGE (outgoing)	
Data Element (Tag)	**Description**
COMMONS User ID (commonsUserId)	The person commons account id submitted in the request
Affiliations (roles)	Role, system organization id and DUNS for each affiliation
Organization ID (dunsId)	Organization ID provided in the request (DUNS Number)

PERSON INFORMATION RESPONSE MESSAGE (outgoing)	
Data Element (Tag)	**Description**
External Organization ID (externalOrgId)	Organization Identifier used in NIH database (e.g., 123456)
Role type (role)	The code which indicates the role type in the eRA database. If multiple roles are associated with the provided Commons User Id, the PI role will be returned if the user has a PI role. (E.g., PI)
Person Name (personName)	Name as entered in Commons personal profile
Person Prefix Name (namePrefix)	From the profile
Person First Name (firstName)	From the profile
Person Middle Name (middleName)	From the profile
Person Last Name (lastName)	From the profile
Person Suffix Name (nameSuffix)	From the profile
Person employment address (employmentAddress)	The address data group related to that affiliation
Line address 1 (lineAddress1)	From the profile
Line address 2 (lineAddress2)	From the profile
Line address 3 (lineAddress3)	From the profile
Line address 4 (lineAddress4)	From the profile
City (city)	City
State (state)	If country is Canada, will return Canadian province code. For countries other than US and Canada will be blank.
Postal Code (postalCode)	Equivalent to "zip code" in the eRA database. Returns 9 digits (zip+four). If only 5 digits of zip code are available, will pad with zeros (e.g., 208171814, 265060000)
Country (countryCode)	This is the ISO-3166 country code (Alpha-3 format) (E.g., USA)
Contact Information (contact)	Phone, email, and fax contact information from Commons personal profile
Phone number (phone)	Phone number
Fax Number (fax)	Fax number
E-mail address (email)	Email address
Preferred address code (preferredAddressCode)	(true/false)
Degree (degree)	This is a repeating element of the degree and degree text if degree is "other".
Position Title (positionTitle)	Position title for this affiliation
List of prior awarded grants for that person and that organization (priorAwardedGrants)	This is a repeating element where each element provides the full grant number with all components including the amendments and multi year awards. Subprojects are not included.

PERSON INFORMATION RESPONSE MESSAGE (outgoing)	
Data Element (Tag)	**Description**
Application Type Code (applicationTypeCode)	Grant Application Type Code (E.g., 1 for New, 2 for Renewal, 3 for Revision, 4 for Extension, 5 for Non-competing Continuation, 6 for Change of Organization Status, 7 for Change of Grantee or Training Institution, 8 for Non-Competing Continuation Change of Institute or Division, 9 for Competing Continuation Change of Institute or Division)
Activity Code (activityCode)	Grant activity code (E.g., R01)
PHS Organization (PHSOrgCode)	Awarding Institute code (E.g., MH)
Serial Number (serialNumber)	Grant serial number (E.g., 000123)
Support Year	Grant support year (E.g., 2)
Person ID	PersonId that uniquely identifies a person (E.g., 9900111)
Orcid	Orcid for the commons user id (E.g., 0000-0000-1234-100X)

Person Information with UEI Request

PERSON UEI INFORMATION REQUEST MESSAGE (incoming)		
FIELD (Tag)	**DESCRIPTION**	**VALIDATION**
COMMONS User ID (userID)	The COMMONS user id of the person the information is requested for	The person must be affiliated with the organization for which the information is requested If not, display the following message: There is no Commons Username <Commons User ID> associated with the institution identified as DUNS < Organization Identifier> Mandatory field

PERSON UEI INFORMATION RESPONSE MESSAGE (outgoing)	
Data Element (Tag)	**Description**
COMMONS User ID (commonsUserId)	The person commons account id submitted in the request
Affiliations (roles)	Role, system organization id and DUNS for each affiliation

PERSON UEI INFORMATION RESPONSE MESSAGE (outgoing)	
Data Element (Tag)	**Description**
Role type (role)	It will include 3 fields. 1. Role: The code which indicates the role type in the eRA database. If multiple roles are associated with the provided Commons User Id, the PI role will be returned if the user has a PI role. (E.g., PI). 2. External org id: Organization Identifier used in NIH database (e.g., 123456) 3. UEI: It is the replacement for dunsID
Person Name (personName)	Name as entered in Commons personal profile
Person Prefix Name (namePrefix)	From the profile
Person First Name (firstName)	From the profile
Person Middle Name (middleName)	From the profile
Person Last Name (lastName)	From the profile
Person Suffix Name (nameSuffix)	From the profile
Person employment address (employmentAddress)	The address data group related to that affiliation
Line address 1 (lineAddress1)	From the profile
Line address 2 (lineAddress2)	From the profile
Line address 3 (lineAddress3)	From the profile
Line address 4 (lineAddress4)	From the profile
City (city)	City
State (state)	If country is Canada, will return Canadian province code. For countries other than US and Canada will be blank.
Postal Code (postalCode)	Equivalent to "zip code" in the eRA database. Returns 9 digits (zip+four). If only 5 digits of zip code are available, will pad with zeros (e.g., 208171814, 265060000)
Country (countryCode)	This is the ISO-3166 country code (Alpha-3 format) (E.g., USA)
Contact Information (contact)	Phone, email, and fax contact information from Commons personal profile
Phone number (phone)	Phone number
Fax Number (fax)	Fax number
E-mail address (email)	Email address
Preferred address code (preferredAddressCode)	(true/false)

PERSON UEI INFORMATION RESPONSE MESSAGE (outgoing)	
Data Element (Tag)	**Description**
Degree (degree)	This is a repeating element of the degree and degree text if degree is "other".
Position Title (positionTitle)	Position title for this affiliation
List of prior awarded grants for that person and that organization (priorAwardedGrants)	This is a repeating element where each element provides the full grant number with all components including the amendments and multi year awards. Subprojects are not included.
Application Type Code (applicationTypeCode)	Grant Application Type Code (E.g., 1 for New, 2 for Renewal, 3 for Revision, 4 for Extension, 5 for Non-competing Continuation, 6 for Change of Organization Status, 7 for Change of Grantee or Training Institution, 8 for Non-Competing Continuation Change of Institute or Division, 9 for Competing Continuation Change of Institute or Division)
Activity Code (activityCode)	Grant activity code (E.g., R01)
PHS Organization (PHSOrgCode)	Awarding Institute code (E.g., MH)
Serial Number (serialNumber)	Grant serial number (E.g., 000123)
Support Year	Grant support year (E.g., 2)

Person Information with Employment with UEI Request

PERSON INFORMATION REQUEST MESSAGE (incoming)		
FIELD (Tag)	**DESCRIPTION**	**VALIDATION**
COMMONS User ID (userID)	The COMMONS user id of the person the information is requested for	The person must be affiliated with the organization for which the information is requested If not, display the following message: There is no Commons Username <Commons User ID> associated with the institution identified as DUNS < Organization Identifier> Mandatory field

PERSON INFORMATION WITH EMPLOYMENT WITH UEI RESPONSE MESSAGE (outgoing)	
Data Element (Tag)	**Description**
COMMONS User ID (commonsUserId)	The person commons account id submitted in the request

PERSON INFORMATION WITH EMPLOYMENT WITH UEI RESPONSE MESSAGE (outgoing)	
Data Element (Tag)	**Description**
Affiliations (roles)	Role, system organization id and DUNS for each affiliation
Organization UEI (uei)	Organization UEI provided in the request
External Organization ID (externalOrgId)	Organization Identifier used in NIH database (e.g., 123456)
Role type (role)	The code which indicates the role type in the eRA database. If multiple roles are associated with the provided Commons User Id, the PI role will be returned if the user has a PI role. (E.g., PI)
Person Name (personName)	Name as entered in Commons personal profile
Person Prefix Name (namePrefix)	From the profile
Person First Name (firstName)	From the profile
Person Middle Name (middleName)	From the profile
Person Last Name (lastName)	From the profile
Person Suffix Name (nameSuffix)	From the profile
Person employment address (employmentAddress)	The address data group related to that affiliation
Line address 1 (lineAddress1)	From the profile
Line address 2 (lineAddress2)	From the profile
Line address 3 (lineAddress3)	From the profile
Line address 4 (lineAddress4)	From the profile
City (city)	City
State (state)	If country is Canada, will return Canadian province code. For countries other than US and Canada will be blank.
Postal Code (postalCode)	Equivalent to "zip code" in the eRA database. Returns 9 digits (zip+four). If only 5 digits of zip code are available, will pad with zeros (e.g., 208171814, 265060000)
Country (countryCode)	This is the ISO-3166 country code (Alpha-3 format) (E.g., USA)
Contact Information (contact)	Phone, email, and fax contact information from Commons personal profile
Phone number (phone)	Phone number
Fax Number (fax)	Fax number
E-mail address (email)	Email address
Preferred address code (preferredAddressCode)	(true/false)
Degree (degree)	This is a repeating element of the degree and degree text if degree is "other".

PERSON INFORMATION WITH EMPLOYMENT WITH UEI RESPONSE MESSAGE (outgoing)	
Data Element (Tag)	**Description**
List of prior awarded grants for that person and that organization (priorAwardedGrants)	This is a repeating element where each element provides the full grant number with all components including the amendments and multi year awards. Subprojects are not included.
Application Type Code (applicationTypeCode)	Grant Application Type Code (E.g., 1 for New, 2 for Renewal, 3 for Revision, 4 for Extension, 5 for Non-competing Continuation, 6 for Change of Organization Status, 7 for Change of Grantee or Training Institution, 8 for Non-Competing Continuation Change of Institute or Division, 9 for Competing Continuation Change of Institute or Division)
Activity Code (activityCode)	Grant activity code (E.g., R01)
PHS Organization (PHSOrgCode)	Awarding Institute code (E.g., MH)
Serial Number (serialNumber)	Grant serial number (E.g., 000123)
Support Year	Grant support year (E.g., 2)

Organization Information Request

ORGANIZATION INFORMATION REQUEST MESSAGE (incoming)		
FIELD (Tag)	**DESCRIPTION**	**VALIDATION**
Organization identifier (dunsID)	The identifier of the organization about which the information is requested. This identifier is the DUNS Number.	Must be serviced by the certificate associated with the caller

ORGANIZATION INFORMATION RESPONSE MESSAGE (outgoing)	
Data Element (Tag)	**Description**
External Organization ID (externalOrgId)	Organization Identifier used in NIH database (e.g., 123456)
Organizatin Name (organizationName)	Name of the organization.
Organization EIN (ein)	EIN for the organization
Organization Address (address)	The profile address for the organization
Line address 1 (lineAddress1)	From the profile
Line address 2 (lineAddress2)	From the profile
Line address 3 (lineAddress3)	From the profile
Line address 4 (lineAddress4)	From the profile
City (city)	City

ORGANIZATION INFORMATION RESPONSE MESSAGE (outgoing)	
Data Element (Tag)	**Description**
State (state)	If country is Canada, will return Canadian province code. For countries other than US and Canada will be blank.
Postal Code (postalCode)	Equivalent to "zip code" in the eRA database. Returns 9 digits (zip+four). If only 5 digits of zip code are available, will pad with zeros (e.g., 208171814, 265060000)
Country (countryCode)	This is the ISO-3166 country code (Alpha-3 format) (E.g., USA)
Organization Status (status)	Indicates whether organization is ACTIVE (A) or Closed (C)
Human Subject Assurance Number (humanSubjectAssuranceNumber)	Human Subject Assurance Number (E.g., FWA00001234)
Animal Welfare Assurance Number	Animal Welfare Assurance Number If there is more than one Animal Welfare Assurance Number associated with this organization they will be returned as a list. For example: <AnimalWelfareAssuranceNumber>Assurance number 1</AnimalWelfareAssuranceNumber> <AnimalWelfareAssuranceNumber>Assurance number 2</AnimalWelfareAssuranceNumber> <AnimalWelfareAssuranceNumber>Assurance number 3</AnimalWelfareAssuranceNumber>
NIH Policy Accepted Flag (nihPolicyAcceptedFlag)	Flag indicating whether applicant organization read and acknowledged NIH submission policy statement or not(Y/N). A "Y" value is needed to successfully submit an NIH application per Submission Validation Service validation 000.44.

Person Basic Information Request

PERSON INFORMATION REQUEST MESSAGE (incoming)		
FIELD (Tag)	**DESCRIPTION**	**VALIDATION**
COMMONS User ID (userID)	The COMMONS user id of the person the information is requested for	

PERSON INFORMATION WITH EMPLOYMENT WITH UEI RESPONSE MESSAGE	
Data Element (Tag)	**Description**
Person Name (personName)	
Person Prefix Name (namePrefix)	From the profile
Person First Name (firstName)	From the profile
Person Middle Name (middleName)	From the profile
Person Last Name (lastName)	From the profile
Person Suffix Name (nameSuffix)	From the profile
Role type (role)	The code which indicates the role type in the eRA database. If multiple roles are associated with the provided Commons User Id, the PI role will be returned if the user has a PI role. (E.g., PI)
Organization UEI (uei)	Organization UEI provided base on external_id
External Organization ID (externalOrgId)	Organization Identifier used in NIH database (e.g., 123456) which is based on user_id

Organization Information By UEI Request

ORGANIZATION INFORMATION REQUEST MESSAGE (incoming)		
FIELD (Tag)	**DESCRIPTION**	**VALIDATION**
Unique Entity Identifier (uei)	The identifier of the organization about which the information is requested. This identifier is the UEI.	Must be serviced by the certificate associated with the caller

ORGANIZATION INFORMATION RESPONSE MESSAGE (outgoing)	
Data Element (Tag)	**Description**
External Organization ID (externalOrgId)	Organization Identifier used in NIH database (e.g., 123456)
Organizatin Name (organizationName)	Name of the organization.
Organization EIN (ein)	EIN for the organization
Organization Address (address)	The profile address for the organization
Line address 1 (lineAddress1)	From the profile
Line address 2 (lineAddress2)	From the profile
Line address 3 (lineAddress3)	From the profile
Line address 4 (lineAddress4)	From the profile
City (city)	City
State (state)	If country is Canada, will return Canadian province code. For countries other than US and Canada will be blank.

ORGANIZATION INFORMATION RESPONSE MESSAGE (outgoing)	
Data Element (Tag)	**Description**
Postal Code (postalCode)	Equivalent to "zip code" in the eRA database. Returns 9 digits (zip+four). If only 5 digits of zip code are available, will pad with zeros (e.g., 208171814, 265060000)
Country (countryCode)	This is the ISO-3166 country code (Alpha-3 format) (E.g., USA)
Organization Status (status)	Indicates whether organization is ACTIVE (A) or Closed (C)
Human Subject Assurance Number (humanSubjectAssuranceNumber)	Human Subject Assurance Number (E.g., FWA00001234)
Animal Welfare Assurance Number	Animal Welfare Assurance Number If there is more than one Animal Welfare Assurance Number associated with this organization they will be returned as a list. For example: <AnimalWelfareAssuranceNumber>Assurance number 1</AnimalWelfareAssuranceNumber> <AnimalWelfareAssuranceNumber>Assurance number 2</AnimalWelfareAssuranceNumber> <AnimalWelfareAssuranceNumber>Assurance number 3</AnimalWelfareAssuranceNumber>
NIH Policy Accepted Flag (nihPolicyAcceptedFlag)	Flag indicating whether applicant organization read and acknowledged NIH submission policy statement or not(Y/N). A "Y" value is needed to successfully submit an NIH application per Submission Validation Service validation 000.44.
Data Element(Tag)	**Description**
uei	UEI for the organization

Prior Grant Request

PRIOR GRANT REQUEST MESSAGE (incoming)		
FIELD (Tag)	**DESCRIPTION**	**VALIDATION**
Federal Identifier (federalID)	The federal identifier from the SF 424 Form	Must include only IC and serial number (e.g. CA987654).
Application Type (applicationType)	The application type from the SF 424 Form <Renewal, Resubmission, Revision>	
Project Start Date (projectStartDate)	The project start date from the SF 424 Form. Format <YYYY-MM-DD or no data between tags>	

PRIOR GRANT REQUEST MESSAGE (incoming)		
FIELD (Tag)	**DESCRIPTION**	**VALIDATION**
Project End Date (projectEndDate)	The project end date from the SF 424 Form. Optional. Format <YYYY-MM-DD or no data between tags>	

PRIOR GRANT RESPONSE MESSAGE (outgoing)	
Data Element (Tag)	**Description**
Accession Number (accessionNum)	NIH internal key assigned before the grant number
Grant Status (grantStatus)	Grant application status post intake. This is the offical grant status throughout the life cycle of the application and grant (E.g., Awarded. Non-fellowships only)
Opportunity identifier (rfapaNumber)	The opportunity under which the prior grant was submitted.

Note: The Opportunity ID format stored in the NIH database is slightly different than what appears in the NIH Guide for Grants & Contracts or in Grants.gov. For example: the database stores PA11-096 for FOA PA-11-096 and NS13-006 for RFA-NS-13-006). |
| Activity Code (activityCode) | Activity code for the prior grant (E.g., R01) |
| Application Type (applicationTypeCode) | The application type code for the prior grant

(E.g., 1 for New, 2 for Renewal, 3 for Revision, 4 for Extension, 5 for Non-competing Continuation, 6 for Change of Organization Status, 7 for Change of Grantee or Training Institution, 8 for Non-Competing Continuation Change of Institute or Division, 9 for Competing Continuation Change of Institute or Division) |
Interim Funding (interimFundingCode)	Indicator if the prior grant received interim funding.
Suffix Code (suffixCode)	Suffix code for the prior grant
Grant Title (projectTitle)	Project title for the prior grant
Application Receipt Date (applReceiveDate)	Date the prior grant was successfully received by NIH
Project Start Date (projectStartDate)	Prior grant start date
Project End Date (projectEndDate)	Prior grant end date
Grant Number (grantNum)	Prior grant number (E.g., R44MD987654-03)
Support Year (supportYear)	Prior grant support year (E.g., 3)

PRIOR GRANT RESPONSE MESSAGE (outgoing)	
Data Element (Tag)	**Description**
Organization Identifier (dunsID)	DUNS of the submitting organization for the prior grant
Award Doc Num (awdDocNum)	Award document Id number
Budget Modular Indicator (isBudgetModular)	An indicator if the prior grant has a modular budget (true/false)
Summary Statement Indicator (doesSummaryStatementExist)	An indicator if a summary statement has been generated for the prior grant
Application Awarded Indicator (isAppAwarded)	An indicator if the prior grant has been awarded (true/false)
Application Verified Indicator (isVerified)	An indicator if the prior grant has been verified (true/false)
COMMONS User Id (piCommonsID)	The Commons User Id of the PI on the prior grant
PI Last Name (existingTransLastName)	The last name of the PI on the prior grant
SBIR STTR process code(SBIRSTTRProcessCode)	Enumeration indicating the SBIR STTR process code. Possible values: Phase I Phase II Fast-Track Direct Phase II Phase IIA Phase IIB Commercialization Readiness Program
Full Opportunity Identifier (fullRfaPaNumber)	The opportunity under which the prior grant was submitted in full format.

Prior Grant With UEI Request

PRIOR GRANT WITH UEI REQUEST MESSAGE (incoming)		
FIELD (Tag)	**DESCRIPTION**	**VALIDATION**
Federal Identifier (federalID)	The federal identifier from the SF 424 Form	Must include only IC and serial number (e.g. CA987654).
Application Type (applicationType)	The application type from the SF 424 Form <Renewal, Resubmission, Revision>	
Project Start Date (projectStartDate)	The project start date from the SF 424 Form. Format <YYYY-MM-DD or no data between tags>	

PRIOR GRANT WITH UEI REQUEST MESSAGE (incoming)		
FIELD (Tag)	**DESCRIPTION**	**VALIDATION**
Project End Date (projectEndDate)	The project end date from the SF 424 Form. Optional. Format <YYYY-MM-DD or no data between tags>	

PRIOR GRANT WITH UEI RESPONSE MESSAGE (outgoing)	
Data Element (Tag)	**Description**
Accession Number (accessionNum)	NIH internal key assigned before the grant number
Grant Status (grantStatus)	Grant application status post intake. This is the offical grant status throughout the life cycle of the application and grant (E.g., Awarded. Non-fellowships only)
Opportunity identifier (rfapaNumber)	The opportunity under which the prior grant was submitted.

Note: The Opportunity ID format stored in the NIH database is slightly different than what appears in the NIH Guide for Grants & Contracts or in Grants.gov. For example: the database stores PA11-096 for FOA PA-11-096 and NS13-006 for RFA-NS-13-006). |
| Activity Code (activityCode) | Activity code for the prior grant (E.g., R01) |
| Application Type (applicationTypeCode) | The application type code for the prior grant

(E.g., 1 for New, 2 for Renewal, 3 for Revision, 4 for Extension, 5 for Non-competing Continuation, 6 for Change of Organization Status, 7 for Change of Grantee or Training Institution, 8 for Non-Competing Continuation Change of Institute or Division, 9 for Competing Continuation Change of Institute or Division) |
Interim Funding (interimFundingCode)	Indicator if the prior grant received interim funding.
Suffix Code (suffixCode)	Suffix code for the prior grant
Grant Title (projectTitle)	Project title for the prior grant
Application Receipt Date (applReceiveDate)	Date the prior grant was successfully received by NIH
Project Start Date (projectStartDate)	Prior grant start date
Project End Date (projectEndDate)	Prior grant end date
Grant Number (grantNum)	Prior grant number (E.g., R44MD987654-03)
Support Year (supportYear)	Prior grant support year (E.g., 3)
UEI	UEI of the submitting organization for the prior grant

PRIOR GRANT WITH UEI RESPONSE MESSAGE (outgoing)	
Data Element (Tag)	**Description**
Award Doc Num (awdDocNum)	Award document Id number
Budget Modular Indicator (isBudgetModular)	An indicator if the prior grant has a modular budget (true/false)
Summary Statement Indicator (doesSummaryStatementExist)	An indicator if a summary statement has been generated for the prior grant
Application Awarded Indicator (isAppAwarded)	An indicator if the prior grant has been awarded (true/false)
Application Verified Indicator (isVerified)	An indicator if the prior grant has been verified (true/false)
COMMONS User Id (piCommonsID)	The Commons User Id of the PI on the prior grant
PI Last Name (existingTransLastName)	The last name of the PI on the prior grant
SBIR STTR process code(SBIRSTTRProcessCode)	Enumeration indicating the SBIR STTR process code. Possible values: Phase I Phase II Fast-Track Direct Phase II Phase IIA Phase IIB Commercialization Readiness Program
Full Opportunity Identifier (fullRfaPaNumber)	The opportunity under which the prior grant was submitted in full format.

FOA Information Request

FOA INFORMATION REQUEST MESSAGE (incoming)		
FIELD (Tag)	**DESCRIPTION**	**VALIDATION**
Opportunity identifier (rfapaNumber)	The opportunity for the current submission (e.g., RFA-NS-13-006, PA-12-150)	Optional. Either Opportunity Identifier or Package Id must be supplied
Package Id(packageId)	The package ID is defined in grants.gov. (e.g., PKG12345678)	Optional. Either Opportunity Identifier or Package Id must be supplied.
Proposal Receipt Date (receiptDate)	Date the prior grant was or will be successfully received by NIH. Format <YYYY-MM-DD>	Optional. If omitted will default to current date.

FOA INFORMATION RESPONSE MESSAGE (outgoing)	
Data Element (Tag)	**Description**
Funding Opportunity Number(fundingOpportunityNumber)	Full funding opportunity number returned from grants.gov for a given package ID.
Activity Code (activityCode)	Activity code associated with opportunity Combined activity codes (e.g., R21/R33) are identified by the isCombinedMechanism flag. When the isCombinedMechanism flag is true, the first of the two activity codes would be listed in this tag (e.g., R21 of R21/R33).
Administering PHS Organization (phsOrgCode)	Institute/Center within Agency sponsoring opportunity
Opt-out Flag (optOutCode)	A code that identifies if PAR or RFA would like to opt out Limited Validation. **Note:** This flag is not being used anymore.
Combined Mechanism Indicator (isCombinedMechanism)	Indicator if opportunity uses combined mechanism (true/false) E.g., R21/R33, UH2/UH3 When true, the activity codes are listed in the activityCode and combinedActivityCode tags.
Program Type (programTypeCode)	Program Type for opportunity (STTR, SBIR)
Direct Phase II (directPhaseII)	Indicator that FOA allows Direct Phase II applications. (Y/N)
Opportunity Title (noticeTitle)	Title of opportunity
Notice Type (noticeTypeCode)	Notice Type for opportunity 'P' = PA (Program Announcement) 'B' = PAR (PA with special Receipt, Referral and/or Review consideration 'P' = PAS (PA with Set-aside funds 'R' = RFA (Request For Applications)
Collaborative Type (collaborativeTypeCode)	Collaborative Type for opportunity. Set to '01/ when the activity code is followed by the string 'Collab'.
Council Round (councilMeetingDate)	Council round for opportunity (yyyymm) Note: If a Council Round does not exist for the requested FOA, the expected Council Round is calculated based on the Proposal Receipt Date. If omitted, the Council Round will be calculated based on the current date.
Agency (agency)	Agency sponsoring opportunity (e.g., NIH)
AIDS Related Code (aidsRelatedCode)	AIDS Related Code for opportunity (Y/N)

FOA INFORMATION RESPONSE MESSAGE (outgoing)	
Data Element (Tag)	**Description**
Multi-project indicator (isComplex)	Indicator for multi-project opportunity (true/false)
Project Period Exception (projectPeriodExceptionFlag)	Set to 'Y' if the FOA has been approved to allow more than 5 budget periods. Set to 'N' otherwise.
Component Labels (component)	Agency defined labels used for expected component types for an opportunity (applies to multi-project submissions only) E.g., Project, Core
Page Limits (pageLimit)	Page limits for research strategy (applies to multi-project submissions only.)
Component Iterations (minIterationNum, maxIterationNum)	Minimum and maximum number of iterations for each expected component type (applies to multi-project submissions only.) Note: limits may be more restrictive than indicated in Grants.gov opportunity schema.
projectCostExceptionFlag	When projectCostExceptionFlag is set to 'Y' then the direct cost limits must be followed as stated in the FOA, not systematically validated for the standard value for the activity code. For example, R03 FOA that allows more than $50,000 in direct costs per budget period.
pageLimitExceptionFlag	When pageLimitExceptionFlag is set to 'Y' then the page limits for that attachment must be followed as stated in the FOA, not systematically validated for the standard value for the activity code. For example, an R01 FOA that allows a 30 page research strategy instead of the standard 12 page limit.
projectPeriodExcepLT5YFlag	When projectPeriodExcepLT5Yflag is set to 'Y' then the project period may be greater than the standard project period for the activity code. For example, R21 FOA that allows more than 2 budget periods. This flag is applicable for activity codes (R03, R21, R36, UH2) that require project period less than 5 years whereas projectPeriodExceptionFlag listed above is applicable for activity codes (For example R01) that require project period 5 years or more.
diversityFlag	When diversityFlag is set to 'Y' on the FOA, then all senior key persons specified on the form must provide a valid Commons Credential.

FOA INFORMATION RESPONSE MESSAGE (outgoing)	
Data Element (Tag)	**Description**
clinicalTrialCode	Indicates whether the FOA supports a clinical trial etc. This is a string with possible values: N, O, R and I. N stands for 'Not-Allowed' O stands for Optional R stands for Required I stands for Required (Infrastructure)
Combined Activity Code (combinedActivityCode)	Combined activity codes (e.g., R21/R33) are identified by the isCombinedMechanism flag. When the isCombinedMechanism flag is true, the second of the two activity codes would be listed in this tag (e.g., R33 of R21/R33).
Data Management Sharing Plan (dmsPlan)	It is a set of codes to indicate the Data Management Sharing Plan. R stands Required NA stands Not Allowed RDS stands Required Data Sharing focus

Stem Cell Line Status Request

STEM CELL LINE STATUS REQUEST MESSAGE (incoming)		
FIELD (Tag)	**DESCRIPTION**	**VALIDATION**
Stem Cell Lines (stemCellLineCode)	List of proposed stem cell lines (e.g., 0043)	

STEM CELL LINE STATUS RESPONSE MESSAGE (outgoing)	
Data Element (Tag)	**Description**
Stem Cell Lines w/ indicators (stemCellLine)	List of requested stem cell lines with indicator if each is valid or not
Cell Line Code (stemCellLineCode)	Cell Line code (E.g., 0001)
Valid (valid)	Indicator of whether a cell line is valid or not (true/false)

Credential Request

CREDENTIAL REQUEST MESSAGE (incoming)		
FIELD (Tag)	**DESCRIPTION**	**VALIDATION**
Last Name (lastName)	Last name of the person whose Commons Credentials are requested	

CREDENTIAL REQUEST MESSAGE (incoming)		
FIELD (Tag)	**DESCRIPTION**	**VALIDATION**
Email (email)	Email of the person whose Commons Credentials are requested	

CREDENTIAL RESPONSE MESSAGE (outgoing)	
Data Element (Tag)	**Description**
Commons User ID (credential)	List of commons user ids that match the lastName and email in the request

SAM Org Info Request

SAM ORG INFO REQUEST MESSAGE (incoming)		
FIELD (Tag)	**DESCRIPTION**	**VALIDATION**
DUNS Number (dunsID)	Primary (9 digit) DUNS number of the organization whose SAM registration info is requested.	

SAM ORG INFO RESPONSE MESSAGE (outgoing)	
Data Element (Tag)	**Description**
SAM Org registration details (SAMOrgInfo)	This is a list of following information. Since an organization can have multiple DUNS Numbers this method returns
samOrgsId	
dunsID	
dunsIDPlus4	
cageCode	
registerationExpirationDate	
legalBusinessName	
dbaName	
companyDivision	
divisionNumber	
samCongressionalDistrict	
entityUrl	
entityStructure	
stateOfIncorporation	
countryOfIncorporation	
businessTypeCounter	
mailingAddressLine1	
mailingAddressLine2	
mailingAddressCity	
mailingAddPostalCode	
mailingAddZipCodePlus4	

SAM ORG INFO RESPONSE MESSAGE (outgoing)	
Data Element (Tag)	**Description**
mailingAddressCountry	
mailingAddStateOrProvince	
govtBusPocFirstName	
govtBusPocMiddleInitial	
govtBusPocLastName	
govtBusPocTitle	
govtBusPocFaxUsOnly	
elecBusPocFirstName	
elecBusPocMiddleInital	
elecBusPocLastName	
electBusPocTitle	
elecBusPocStAdd1	
elecBusPocStAdd2	
elecBusPocCity	
elecBusPocZipPostalCode	
elecBusPocZipPostalCodePlus4	
elecBusPocCountryCode	
elecBusPocStateOrProvince	
elecBusPocUsPhone	
elecBusPocUsPhoneExt	
elecBusPocNonUsPhone	
elecBusPocFaxUsOnly	
elecBusPocEmail	
domesticParentDunsNumber	
domesticParentStAdd1	
domesticParentStAdd2	
domesticParentCity	
domesticParentPostalCode	
domesticParentCountryCode	
domesticParentStateOrProv	
domesticParentPhone	
averageNumberOfEmployees	
delinquentFederalDebtFlag	
exclusionStatusFlag	
lastMonthlyRunDate	
softDeletedFlag	
lastUpdId	
lastUpdDate	
registrationDate	
samAddress1	
samAddress2	
samCity	

SAM ORG INFO RESPONSE MESSAGE (outgoing)	
Data Element (Tag)	**Description**
samPostalCode	
samProvinceOrState	
samCountryCode	
samZipCodePlus4	

SAM Org Info by UEI Request

SAM ORG INFO REQUEST MESSAGE (incoming)		
FIELD (Tag)	**DESCRIPTION**	**VALIDATION**
UEI(uei)	UEI of the organization whose SAM registration info is requested.	

SAM ORG INFO RESPONSE MESSAGE (outgoing)	
Data Element (Tag)	**Description**
SAM Org registration details (SAMOrgInfo)	This is a list of following information. Since an organization can have multiple DUNS Numbers this method returns
samOrgsId	
dunsID	
dunsIDPlus4	
cageCode	
registerationExpirationDate	
legalBusinessName	
dbaName	
companyDivision	
divisionNumber	
samCongressionalDistrict	
entityUrl	
entityStructure	
stateOfIncorporation	
countryOfIncorporation	
businessTypeCounter	
mailingAddressLine1	
mailingAddressLine2	
mailingAddressCity	
mailingAddPostalCode	
mailingAddZipCodePlus4	
mailingAddressCountry	
mailingAddStateOrProvince	
govtBusPocFirstName	
govtBusPocMiddleInitial	
govtBusPocLastName	

SAM ORG INFO RESPONSE MESSAGE (outgoing)	
Data Element (Tag)	**Description**
govtBusPocTitle	
govtBusPocFaxUsOnly	
elecBusPocFirstName	
elecBusPocMiddleInital	
elecBusPocLastName	
electBusPocTitle	
elecBusPocStAdd1	
elecBusPocStAdd2	
elecBusPocCity	
elecBusPocZipPostalCode	
elecBusPocZipPostalCodePlus4	
elecBusPocCountryCode	
elecBusPocStateOrProvince	
elecBusPocUsPhone	
elecBusPocUsPhoneExt	
elecBusPocNonUsPhone	
elecBusPocFaxUsOnly	
elecBusPocEmail	
domesticParentDunsNumber	
domesticParentStAdd1	
domesticParentStAdd2	
domesticParentCity	
domesticParentPostalCode	
domesticParentCountryCode	
domesticParentStateOrProv	
domesticParentPhone	
averageNumberOfEmployees	
delinquentFederalDebtFlag	
exclusionStatusFlag	
lastMonthlyRunDate	
softDeletedFlag	
lastUpdId	
lastUpdDate	
registrationDate	
samAddress1	
samAddress2	
samCity	
samPostalCode	
samProvinceOrState	
samCountryCode	
samZipCodePlus4	
Data Element(Tag)	**Description**

SAM ORG INFO RESPONSE MESSAGE (outgoing)	
Data Element (Tag)	**Description**
SAM Org Info By UEI Response: GetSAMOrgInfoByUEIResponse	
uei	

Generate Grant Image

GRANT IMAGE REQUEST MESSAGE (incoming)		
FIELD (Tag)	**DESCRIPTION**	**VALIDATION**
Application XML	Grant Application as XML, both Single and Complex Grant application formats are accepted	
Attachments	List: 0 to many	
Reference	The value of "href" attribute in corresponding "FileLocation" sub element in the "Attachment" element in application XML. Please refer Appendix D for details of an "Attachment" element in the XML	This must match one of the href values in the application XML
Content	Actual PDF as Octet Stream	Must be a valid PDF document

GRANT IMAGE RESPONSE MESSAGE (outgoing)	
Data Element (Tag)	**Description**
Image Content	Generated Image as Octet Stream

Generate Component Image

COMPONENT IMAGE REQUEST MESSAGE (incoming)		
FIELD (Tag)	**DESCRIPTION**	**VALIDATION**
componentXML	XML for the Component whose image is requested.	
schemaMetadata	Metadata of the schema associated with the complex application FOA. It contains the following sub fields.	
projectType	Enumeration indicating whether the project associated with this component is 'Complex', 'Single' or 'Nonresearch'.	For this API please pass 'Complex'. SchemaMetadata is a generic construct so project type is expected and since this API makes sense only for ComplexApplication, only use Complex.
formMetadata	Meatadata of forms contained in schema. This is a list and at least one value is expected. Each formMetadata field contains following sub fields.	
formName	Name of the form. Please use name of the root element in the form schema as listed by Grants.gov except version info.	R&R SF424 form schema lists the root element as RR_SF424_2_0. FormName is expected as RR_SF424
nameSpacePrefix	Namespace prefix used for the elements for this form in the xml	Advised to use what is listed in schema. For example, grants.gov schema for R&R SF424 form lists the namespace prefix as RR_SF242_2_0
version	Version of the form	For example, version of R&R SF242 form is 2.0
attachments	List: 0 to many	
reference	The value of "href" attribute in corresponding "FileLocation" sub element in the "Attachment" element in application XML. Please refer Appendix D for details of	This must match one of the href values in the component XML

COMPONENT IMAGE REQUEST MESSAGE (incoming)		
FIELD (Tag)	**DESCRIPTION**	**VALIDATION**
	an "Attachment" element in the XML	
Content	Actual PDF as Octet Stream	Must be a valid PDF document
piName	Name of the PI. PI name usually appears in the header.	

COMPONENT IMAGE RESPONSE MESSAGE (outgoing)	
Data Element (Tag)	**Description**
impageContent	Generated Component Image as Octet Stream

Generate Form Image

FORM IMAGE REQUEST MESSAGE (incoming)		
FIELD (Tag)	**DESCRIPTION**	**VALIDATION**
formName	Name of the form. Please use name of the root element in the form schema as listed by Grants.gov except version info.	R&R SF424 form schema lists the root element as RR_SF424_2_0. FormName is expected as RR_SF424
formXML	XML for the Form whose image is requested.	
schemaMetadata	Metadata of the schema associated with the complex application FOA. It contains the following sub fields.	
projectType	Enumeration indicating whether the project associated with this component is 'Complex', 'Single' or 'Nonresearch'.	For this API please pass 'Complex'. SchemaMetadata is a generic construct so project type is expected and since this API makes sense only for ComplexApplication, only use Complex.
formMetadata	Meatadata of forms contained in schema. This is a list and at least one value is expected. Each formMetadata field contains following sub fields.	

FORM IMAGE REQUEST MESSAGE (incoming)		
FIELD (Tag)	**DESCRIPTION**	**VALIDATION**
formName	Name of the form. Please use name of the root element in the form schema as listed by Grants.gov except version info.	R&R SF424 form schema lists the root element as RR_SF424_2_0. FormName is expected as RR_SF424
nameSpacePrefix	Namespace prefix used for the elements for this form in the xml	Advised to use what is listed in schema. For example, grants.gov schema for R&R SF424 form lists the namespace prefix as RR_SF242_2_0
version	Version of the form	For example, version of R&R SF242 form is 2.0
attachments	List: 0 to many	
reference	The value of "href" attribute in corresponding "FileLocation" sub element in the "Attachment" element in application XML. Please refer Appendix D for details of an "Attachment" element in the XML	This must match one of the href values in the component XML
Content	Actual PDF as Octet Stream	Must be a valid PDF document
piName	Name of the PI. PI name usually appears in the header.	

FORM IMAGE RESPONSE MESSAGE (outgoing)	
Data Element (Tag)	**Description**
impageContent	Generated Form Image as Octet Stream

Generate Clinical Trials Form Image

FORM IMAGE REQUEST MESSAGE (incoming)		
FIELD (Tag)	**DESCRIPTION**	**VALIDATION**
pdfattachment	1 pdf attachment with details	

FORM IMAGE REQUEST MESSAGE (incoming)		
FIELD (Tag)	**DESCRIPTION**	**VALIDATION**
reference	File name of the pdf (PHSHumanSubjectsAndClinicalTrialsInfo-V1.0.pdf, with filled-in data by user). Please refer Appendix E for sample XML for this call.	
Content	Actual PDF as Octet Stream	Must be a valid PDF document

FORM IMAGE RESPONSE MESSAGE (outgoing)	
Data Element (Tag)	**Description**
imageContent	Generated Clinical Trials Form Image as Octet Stream

Process RFA PA Notice

RFA PA Notice REQUEST MESSAGE (incoming)		
FIELD (Tag)	**DESCRIPTION**	**VALIDATION**
activityCode	A code that identifies the subcategory of an extramural activity. It is used for auto assignment of RFA Notice.	Activity code should be valid and be present in Activity_codes_t table
parentIndicator	A code that indicates whether this notice is a parent. Valid values true or false	
coIC	PHS Admin Org Code	IC should be valid in PHS_ORGS_T
RFAPANumber	This is used to uniquely identify RFA or PA issues by IC.	RFAPANumber cannot be empty Notice Type code cannot be empty and it should start with PA or PAR or RFA RFAPANumber cannot be greater than 10
primaryIC	The Primary IC that the RFA belongs to.	IC should be valid in PHS_ORGS_T

RFA PA Notice REQUEST MESSAGE (incoming)		
FIELD (Tag)	**DESCRIPTION**	**VALIDATION**
receiptDate	The anticipated receipt date for responses to an RFA or PA.	
optOutIndicator	A code that identifies if PAR or RFA would like to opt out Limited Validation.	
clinicalTrialCode	Clinical trial code like N, O, R, I	
expirationDate	The expiration date of RFA or PA.	
openingDate	The date that RFA/PA notice is open.	
FOATitle	The title given to the RFA/PA notice.	
projectPeriodExceptionFlag	Flag indicating if FOA allows project period to be longer than 5 years: 'Y' - FOA allows project period be longer than 5 years; 'N' - does not allow	
directPhaseTwoFlag	Flag indicating if FOA is an SBIR/STTR direct phase 2; 'Y' - FOA is an SBIR/STTR in Direct phase 2 'N' - FOA is an SBIR/STTR NOT in Direct phase 2	
standardDueDateFlag	Flag indicating if FOA uses standard date: 'Y' - FOA uses standard date, 'N' - FOA does not use standard date	
graceDate	The date when FOA is still valid beyond the expiration date.	
ReviewCriteriaLabel	A unique number identifying the label set	
projectCostExceptionFlag	Flag = Y to indicate Funding Opportunity Announcement allows Project Cost limit exception Flag = N to indicate FOA does not allow Project Cost limit exception	
pageLimitExceptionFlag	Flag = Y to indicate Funding Opportunity Announcement allows Project Cost limit exception Flag = N to indicate Funding Opportunity Announcement does not allow Project Cost limit exception	
projectPeriodExcepLT5YFlag	Flag = 'Y' to indicate Funding Opportunity Announcement Flag = 'Y' to indicate Funding Opportunity Announcement allows Project Period Exception less than 5 years exception Flag = 'N' to indicate Funding Opportunity Announcement does not	

RFA PA Notice REQUEST MESSAGE (incoming)		
FIELD (Tag)	**DESCRIPTION**	**VALIDATION**
	allow Project Period Exception less than 5 years exception	
diversityFlag	Flag = 'Y' to indicate Parent Type 3 Diversity FOA, possible values are Y, N and null	
component		Components should not be duplicate
componentLabel	Label for the component	
pageLimit	Maximum no of pages for the component	
minIterationNum	Minimum no of times the component can be present	
maxIterationNum	Maximum no of times the component can be present	

RFA PA Notice RESPONSE MESSAGE (outgoing)	
Data Element (Tag)	**Description**
successful	Boolean stating if the RFA PA request information is successfully persisted to DB

Regenerate Grant Image

Regenerate Grant Image REQUEST MESSAGE (incoming)		
FIELD (Tag)	**DESCRIPTION**	**VALIDATION**
applId	ApplId Associated with an application	

Regenerate Grant Image RESPONSE MESSAGE (outgoing)	
Data Element (Tag)	**Description**
success	Boolean stating if the regenerate grant image operation is successfully executed and a new grant image is saved to DB

Appendices

Appendix A: Attachment Meta Data Notes

NIH uses ASPOSE pdf library to generate meta data for attachments
If the PDF size is 8.5 x 11 or 11 x 8.5 then we indicate resizing is not required.

--Attachment in xml file:

   <PHS398_ResearchPlan_1_3:attFile>

```
    <att:FileName>1-AddBioSketchA.pdf</att:FileName>
    <att:MimeType>application/pdf</att:MimeType>
    <att:FileLocation att:href="1-AddBioSketchA.pdf.81"/>
    <glob:HashValue glob:hashAlgorithm="SHA-
1">yKdg68TocrfWwagB79Fn5bNm3yA=</glob:HashValue>
  </PHS398_ResearchPlan_1_3:attFile>
```

--Sample of metadata

```
<typ:AttachmentMetaData>
        <typ:FileName>1-AddBioSketchA.pdf</typ:FileName>
        <typ:MimeType>application/pdf</typ:MimeType>
        <typ:FileLocation>1-AddBioSketchA.pdf.81</typ:FileLocation>
        <typ:SizeInBytes>8703</typ:SizeInBytes>
        <typ:PageCount>1</typ:PageCount>
        <typ:numberofLiness>40</typ:numberofLines>
        <typ:isResizingRequired>false</typ:isResizingRequired>
        <typ:isEncryptedAttachment>false</typ:isEncryptedAttachment>
        <typ:ispasswordProtectedAttachment>false</typ:ispasswordProtectedAttachment>
        <typ:isSecure>false</typ:isSecure>
        <typ:pdfError>false</typ:pdfError>
        <typ:isXfaPdf>false</typ:isXfaPdf>
</typ:AttachmentMetaData>
```

What are XFA forms and how they are different from AcroForms:
XFA stands for XML Forms Architecture (XFA) also known as LiveCycle forms

This link explains the differences well: https://appligent.com/what-is-the-difference-between-acroforms-and-xfa/

Relevant text from this link:
AcroForms are the original PDF forms technology, first introduced in 1998. AcroForms accept input in both Forms Data Format (FDF) and XML Forms Data Format (xFDF). Many 3rd party vendors support AcroForms.

Adobe's acquisition of Accelio in 2003 brought that company's XFA forms technology to Adobe, where it is made available via Acrobat LiveCycle Designer. XFA forms are inherently XML rather than PDF, and are incompatible with conventional PDF files. XFA forms "break" Adobe's Acrobat software, in the sense that Acrobat cannot be used to modify a LiveCycle Designer-created document. XFA forms are not yet fully supported by third party PDF viewers' vendors. Currently Adobe LiveCycle server software is required to process XFA forms in a server environment.

How to determine if a PDF is an XFA form:
Open the document in Acrobat Reader of Acrobat Pro.
Select File->Properties from the menu.
In the 'Description' tab, look for PDF Producer in the 'Advanced Group'.

It will be a version of 'Adobe LiveCycle Designer' if the PDF is an XFA form.

Appendix B: Sub Application ID Sample

--Sample XML snippet with sub application id

```
<Admin-Core:SubApplicationGroup xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:Admin-Core="http://apply.grants.gov/system/MetaMultiGrantApplication/Admin-
Core"
xsi:schemaLocation="http://apply.grants.gov/system/MetaMultiGrantApplication/Admin-
Core http://apply07.grants.gov/apply/opportunities/schemas/applicant/oppPA-60-999-
cidMULTI-PROJECT-PILOT/Admin-Core.xsd"><Admin-Core:SubApplicationGroupHeader>
<Admin-Core:SubApplicationGroupID>Admin-Core</Admin-Core:SubApplicationGroupID>
</Admin-Core:SubApplicationGroupHeader>
<Admin-Core:SubApplication>
<Admin-Core:SubApplicationHeader>
<Admin-Core:SubApplicationID>687-Admin-Core</Admin-Core:SubApplicationID>
</Admin-Core:SubApplicationHeader>
<Admin-Core:GrantApplication>
```

Appendix C: Testing Services

If you have a method of creating a client program to test the services, it is recommended to use that for accessing and testing these services. Alternatively all the services listed in this document can be tested using SOAP UI. You can follow these instructions on how to import a wsdl file and test a service.

1. Create a new project in SOAP UI and select the wsdl file for which the project is being created. If you are testing SADS service in UAT, you would use the URL: https://services.external.uat.era.nih.gov/eraexchange/services/SubmissionAgencyDataService?wsdl
2. Click OK, SOAP UI will create the project and generate sample requests for all operations supported by the service.
3. Open the request for the service method that needs to be tested and edit the request supplying all necessary data
4. Make sure the end point, points to the correct service end point in appropriate environment. For example for the service mentioned in step 1, the end point is https://services.external.uat.era.nih.gov/eraexchange/services/SubmissionAgencyDataService
5. Set up the certificate: (assumption is that the certificate is already registered with eRA and necessary roles have been added to the account that the certificate is mapped to)
   a. Double click on the project and select WS-Security Configurations tab and select Keystores sub tab
   b. Add the java key store file associated with the certificate in this tab and provide required credentials
   c. Also configure SSL Keystore property in "request properties" window to point to the same key store file used in 5b
   d. Submit the request
6. Response window shall show the response from the service.

Additional instructions for testing SIL:
Since SIL deals with PDF attachments in the request and the response is a PDF stream, a few more steps are involved:

1. To add attachment, please click on the Attachment… button at the bottom of the Request window.
2. Choose the file that will be an attachment in the request. It will show up in the request window.
3. Change the name to match "href" element for the corresponding element in the XML as well as the "reference" element in the "attachments" section of the request.
4. Submit the request.
5. If the image is generated successfully, the response will show a reference to the file that is downloaded.
6. To see the image, click the Attachments button at the bottom of the response window, which will open the grant image in a pdf reader.

Sample XML:

Attachment element in XML:
```
<RR_SF424_2_0:SFLLLAttachment>
  <att:FileName>SFLLLAttachment</att:FileName>
  <att:MimeType>application/pdf</att:MimeType>
  <att:FileLocation att:href="sflllattachment"/>
  <glob:HashValue glob:hashAlgorithm="">MA==</glob:HashValue>
</RR_SF424_2_0:SFLLLAttachment>
```

Corresponding attachment stream map in the request:
```
<sub:attachments>
  <sub:reference>sflllattachment</sub:reference>
  <!--Optional:-->
  <sub:content>cid:sflllattachment.pdf</sub:content>
</sub:attachments>
```

Response
```
<soap:Body>
  <ImageResponse xmlns="http://era.nih.gov/submissionimageservice">
    <imageContent>
      <xop:Include href="cid:10a77a26-52c8-43fd-a6bb-37ec4e41696a-6@era.nih.gov"
xmlns:xop="http://www.w3.org/2004/08/xop/include"/>
    </imageContent>
  </ImageResponse>
</soap:Body>
```

Screenshot of SOAP UI showing, part of request, response, Attachments details (both for request and response):

Appendix D: Sample XML for Generate Form Image API:

Sample XML and Attachment Info for generateFormImage API is listed below. Input for component image is similar.

```
<soapenv:Envelope
xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:sub="http://era.nih.gov/submissionimageservice">
   <soapenv:Header/>
   <soapenv:Body>
      <sub:FormWithAttachmentsRequest>
         <sub:formName>RR_KeyPersonExpanded</sub:formName>

<sub:formXML><![CDATA[<RR_KeyPersonExpanded_2_0:RR_KeyPersonExpanded_2
_0
xmlns:RR_KeyPersonExpanded_2_0="http://apply.grants.gov/forms/RR_KeyPe
```

```
rsonExpanded_2_0-V2.0"
xmlns:att="http://apply.grants.gov/system/Attachments-V1.0"
xmlns:glob="http://apply.grants.gov/system/Global-V1.0"
xmlns:globLib="http://apply.grants.gov/system/GlobalLibrary-V2.0"
RR_KeyPersonExpanded_2_0:FormVersion="2.0">
  <RR_KeyPersonExpanded_2_0:PDPI>
    <RR_KeyPersonExpanded_2_0:Profile>
      <RR_KeyPersonExpanded_2_0:Name>
        <globLib:FirstName>Weerakoon Mudiyanselage</globLib:FirstName>
        <globLib:MiddleName>Thushantha Harshi</globLib:MiddleName>
        <globLib:LastName>Weerasinghe</globLib:LastName>
      </RR_KeyPersonExpanded_2_0:Name>
      <RR_KeyPersonExpanded_2_0:Address>
        <globLib:Street1>FQUBED, INC.</globLib:Street1>
        <globLib:Street2>6330 NANCY RIDGE DR, STE
107</globLib:Street2>
        <globLib:City>SAN DIEGO</globLib:City>
        <globLib:State>CA: California</globLib:State>
        <globLib:ZipPostalCode>921213220</globLib:ZipPostalCode>
        <globLib:Country>USA: UNITED STATES</globLib:Country>
      </RR_KeyPersonExpanded_2_0:Address>
      <RR_KeyPersonExpanded_2_0:Phone>858-677-
6733</RR_KeyPersonExpanded_2_0:Phone>
      <RR_KeyPersonExpanded_2_0:Fax>858-677-
6737</RR_KeyPersonExpanded_2_0:Fax>

<RR_KeyPersonExpanded_2_0:Email>eRADev@mail.nih.gov</RR_KeyPersonExpan
ded_2_0:Email>
      <RR_KeyPersonExpanded_2_0:OrganizationName>FQUBED,
INC.</RR_KeyPersonExpanded_2_0:OrganizationName>

<RR_KeyPersonExpanded_2_0:Credential>john.newsam</RR_KeyPersonExpanded
_2_0:Credential>
      <RR_KeyPersonExpanded_2_0:ProjectRole>Other
(Specify)</RR_KeyPersonExpanded_2_0:ProjectRole>
      <RR_KeyPersonExpanded_2_0:OtherProjectRoleCategory>Project
Lead</RR_KeyPersonExpanded_2_0:OtherProjectRoleCategory>

<RR_KeyPersonExpanded_2_0:DegreeType>DPHIL,DPH,MA,BA</RR_KeyPersonExpa
nded_2_0:DegreeType>
      <RR_KeyPersonExpanded_2_0:BioSketchsAttached>
        <RR_KeyPersonExpanded_2_0:BioSketchAttached>
          <att:FileName>1-AddBioSketchA.pdf</att:FileName>
          <att:MimeType>application/pdf</att:MimeType>
          <att:FileLocation att:href="1-AddBioSketchA.pdf.42859" />
          <glob:HashValue glob:hashAlgorithm="SHA-
1">WVHHJ/W0G6RzIs4UpZC44ejSuUw=</glob:HashValue>
        </RR_KeyPersonExpanded_2_0:BioSketchAttached>
      </RR_KeyPersonExpanded_2_0:BioSketchsAttached>
    </RR_KeyPersonExpanded_2_0:Profile>
  </RR_KeyPersonExpanded_2_0:PDPI>
```

```
</RR_KeyPersonExpanded_2_0:RR_KeyPersonExpanded_2_0>]]></sub:formXML>
        <sub:schemaMetadata>
            <sub:projectType>Complex</sub:projectType>
            <!--1 or more repetitions:-->
            <sub:formMetadata>
                <sub:formName>RR_KeyPersonExpanded</sub:formName>

<sub:nameSpacePrefix>RR_KeyPersonExpanded_2_0</sub:nameSpacePrefix>
                <sub:version>2.0</sub:version>
            </sub:formMetadata>
        </sub:schemaMetadata>
        <!--Zero or more repetitions:-->
        <sub:attachments>
            <sub:reference>1-AddBioSketchA.pdf.42859</sub:reference>
            <sub:content>cid:1-AddBioSketchA.pdf</sub:content>
        </sub:attachments>

        <sub:piName>TEST_PI</sub:piName>
      </sub:FormWithAttachmentsRequest>
    </soapenv:Body>
</soapenv:Envelope>
```

Appendix E: Sample XML for Generate Clinical Trials Form Image API:

Sample XML and Attachment Info for generateClinicalTrialsFormImage API is listed below.

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:sub="http://era.nih.gov/submissionimageservice">
  <soapenv:Header/>
  <soapenv:Body>
    <sub:PdfWithAttachmentsRequest>
      <sub:pdfattachment>
        <sub:reference>Scenario1a_updated.pdf</sub:reference>
        <sub:content>cid:Scenario1a_updated.pdf</sub:content>
      </sub:pdfattachment>
    </sub:PdfWithAttachmentsRequest>
  </soapenv:Body>
</soapenv:Envelope>
```

Appendix F: Sample XML for FOA Information Request with package ID:

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:typ="http://era.nih.gov/sads/types">
  <soapenv:Header/>
  <soapenv:Body>
    <typ:GetFOAInfoRequest>
      <typ:packageId>PKG00044588</typ:packageId>
    </typ:GetFOAInfoRequest>
  </soapenv:Body>
</soapenv:Envelope>
```

Appendix G: Sample XML for RFA PA Notice Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:ws="http://ws.eraexchange.nih.gov/" xmlns:typ="http://types.ws.eraexchange.nih.gov/">
  <soapenv:Header/>
  <soapenv:Body>
    <ws:processRfaPaNoticeElement>
      <typ:activityCode>U19</typ:activityCode>
                        <typ:parentIndicator>false</typ:parentIndicator>
                        <typ:RFAPANumber>PAR-19-276</typ:RFAPANumber>
                        <typ:transactionIndicator/>
                        <typ:primaryIC>NIA</typ:primaryIC>
                        <typ:receiptDate>2022-09-25T11:32:58Z</typ:receiptDate>
                        <typ:optOutIndicator>false</typ:optOutIndicator>
                        <typ:clinicalTrialCode>O</typ:clinicalTrialCode>
                        <typ:expirationDate>2022-09-26T11:32:58Z</typ:expirationDate>
                        <typ:openingDate>2019-12-25T11:32:58Z</typ:openingDate>
                        <typ:FOATitle>Complex Integrated Multi-Component Projects in Aging
Research (U19 Clinical Trial Optional)</typ:FOATitle>
                        <typ:projectPeriodExceptionFlag>false</typ:projectPeriodExceptionFlag>
                        <typ:directPhaseTwoFlag>false</typ:directPhaseTwoFlag>
                        <typ:standardDueDateFlag>true</typ:standardDueDateFlag>
                        <typ:graceDate>2022-10-30T11:32:58Z</typ:graceDate>
                        <typ:ReviewCriteriaLabel/>
                        <typ:component>
                                <typ:componentLabel>Overall</typ:componentLabel>
                                <typ:pageLimit>12</typ:pageLimit>
                                <typ:minIterationNum>1</typ:minIterationNum>
                                <typ:maxIterationNum>1</typ:maxIterationNum>
                        </typ:component>
                        <typ:component>
                                <typ:componentLabel>Admin Core</typ:componentLabel>
```

```
                    <typ:pageLimit>6</typ:pageLimit>
                    <typ:minIterationNum>1</typ:minIterationNum>
                    <typ:maxIterationNum>1</typ:maxIterationNum>
            </typ:component>
            <typ:component>
                    <typ:componentLabel>Core</typ:componentLabel>
                    <typ:pageLimit>6</typ:pageLimit>
                    <typ:minIterationNum/>
                    <typ:maxIterationNum>9</typ:maxIterationNum>
            </typ:component>
            <typ:component>
                    <typ:componentLabel>Project</typ:componentLabel>
                    <typ:pageLimit>12</typ:pageLimit>
                    <typ:minIterationNum>1</typ:minIterationNum>
                    <typ:maxIterationNum>9</typ:maxIterationNum>
            </typ:component>
            <typ:projectCostExceptionFlag>N</typ:projectCostExceptionFlag>
            <typ:pageLimitExceptionFlag>N</typ:pageLimitExceptionFlag>

      <typ:projectPeriodExcepLT5YFlag>N</typ:projectPeriodExcepLT5YFlag>
                    <typ:diversityFlag/>
    </ws:processRfaPaNoticeElement>
  </soapenv:Body>
</soapenv:Envelope>
```

Document History

Document Location

The NIH internal source document is located in ClearCase under
"External\eRAExchange\docs\6.deployment\user_guide\".

Revision History

Version Number	Revision Date	Author	Summary of Changes
0.0	May-06	eRA Dev Team	Document creation
2.0	Jan-08	eRA Dev Team	Updates for migration to WSDL
3.0	Jan-12	eRA Dev Team (AD)	Updates for Complex Project
4.0	May-13	eRA Dev Team (KM)	Removed Person Info Update Request & Degree Code Lookup Values. Updates Input/Outputs for Complex Project.
4.0.1	May-13	eRA Team (SC)	Provided additional context (tag names, improved descriptions, examples, samples)

4.0.2	Dec-13	eRA Team (SC)	Removed 'DRAFT' watermark and updated logo. Updated Get FOA Information request to include Project Period Exception indicator. Clarified that the SVS service is not yet available.
4.0.3	Jan-13	eRA Team (SC)	Updated Get FOA Information request to include Direct Phase II indicator.
4.0.4	Jan-15	eRA Team	Updated SVS and SADS service details, added details for SIL
4.0.5	Mar-17	eRA Team	Updated SADS service details.
4.0.6	July-15	eRA Team	Updated combined activity code information for tags: isCombinedMechanism, activityCode, and combinedActivityCode.
4.0.7	Oct-15	eRA Team	Updated FOA Response to reflect diversity flag and other exception flags.
4.0.8	Nov-15	eRA Team	Updated Submission Image Generation Service details to reflect the changes to remove Submission Identifier and isNIHApp
4.0.9	May-16	eRA Team	Added two new SADS API getCredential and getSAMOrgInfo
4.2	Jan-17	eRATeam	Added 2 new API for Submission Image Generation Service. These API are generateComponentImage and generateFormImage. A new flag 'clinicalTrialFlag' has been added to getFOAInfo response.
4.3	Feb-17	eRATeam	Added 2 new elements to AttachmentMetadata for SubmissionValidationService methods
4.4	Aug-17	eRATeam	Removed the following methods from the SADS service: - Non research Amendment Types request - Non research Amendment Forms request - Non research Grant Details request Removed the flag isSBIRSTTRPhaseIIBAwarded from Prior Grant Response and added SBIR STTR Process code which is an enumeration FOAInformation Response:

			Removed the clinicialTrialFlag and added ClinicalTrialCode
4.5	July-18	eRATeam	Updated Organization Information response. A new flag nihPolicyAcceptedFlag has been added to the response
4.6	Aug-18	eRATeam	Updated new API (generateClinicalTrialsFormImage) for Submission Image Generation Service.
4.7	Sep-18	eRATeam	Update the existing API getFOAInfo for SubmissionAgencyDataService
4.8	July-20	eRATeam	Added RFA PA Notice service
4.9	Nov-20	eRATeam	Updated the existing API getPersonInfo for SubmissionAgencyDataService to add personId and OrcId to the response
5.0	Apr-21	eRATeam	Updated the description for opt-Out Flag in FOA INFORMATION RESPONSE MESSAGE
5.1	Jun-21	eRATeam	Added new operation regenerateGrantImage to Submission Agency Data Services (SADS)
5.2	Aug-21	eRATeam	Added new operation getSAMOrgInfoByUEI to Submission Agency Data Services(SADS)
5.3	Aug-21	eRATeam	Added new operation getOrganizationInfoByUEI to Submission Agency Data Services(SADS)
5.4	Sep-21	eRATeam	Added getPersonInfoWithEmploymentWithUEI operation to SADS
5.5	Sep-21	eRATeam	Added getPersonInfoWithUEI operation to SADS
5.6	Sep-21	eRATeam	Added getPriorGrantInfoWithUEI operation to SADS
5.7	May-22	eRATeam	Added full rfa pa number to getPriorGrantInfo and getPriorGrantInfoWithUEI
5.8	May-22	eRATeam	Remove getPreviousSubmissionInfo which is not present in external
5.9	Aug-22	eRATeam	Add getPersonBasicInfo in external
5.10	Aug-22	eRATeam	Add dmsPlan in response of getFOAInfo external