

# Service Provider Technical Questions for NIH

*February 25, 2004*

1. The URLs we've been using for the past week are for TEST, right?

**Answer:**

**Right.**

2. Infoxchg is the "mirror" URL and valxchg is the production URL. This is true for both TEST and PRODUCTION, right?

**Answer:**

**Infoxchg is the real exchange. It saves data submitted via the XML and generates the PDF images after the data is validated and saved in the database. Valxchg is just a validation exchange, and has been referred to as a "mirror". It neither saves the data in the database nor generates the PDF image. It only validates the data against the business rules.**

**If the Valxchg returns a success, it means that the data is good to submit to Infoxchg. So this is just a helper service for SBIRs to validate the data before they submit to the real exchange. Yes, this is true for both TEST and PRODUCTION.**

3. If 1 and 2 are true, then I do not understand the recommendation that we not submit to PRODUCTION until we have successfully submitted an application in TEST. It seems to me that I'm wasting my time submitting to TEST, I should submit my applications to PRODUCTION (infoxchg) until I'm successful and then submit to PRODUCTION(valxhg).

**Answer:**

**The only reason we provided the Valxchg in test environment was to make the SBIRs familiar with the service.**

**The reason we recommended saving the application in test first is because there is very remote possibility that the application will be successful in production when it wasn't successful in test. We don't want people to do testing in production, as it is much easier to resolve issues in test than production. If you want us to touch anything in production, including the simplest data change, we have to submit a change request to the configuration management board, wait for approval and then let our Operations team make the change. In test, we can respond to your request almost immediately. Why would you test your code against a production database?**

4. There are only four URLs. It would clear up questions 1 and 2 if you would just list out all four URLs and describe the purpose of each one (use the names TEST and PRODUCTION).

**Answer:**

**The architecture of the eRA Exchange is designed to scale to a large number of transactions, if needed. Separate servers for validation services and submissions can be deployed and tuned to control load on servers. The eRA system is a very mature and large system sustaining the NIH enterprise processes with hundreds of users every day. A great deal of care is taken not to compromise these systems in any way without proper testing. The following architecture has been put in place:**

**Production environment:**

- **Service: Submission of tickets, applications, information requests and status requests. For applications, this only validates the application but does not save the application or generate PDF**

URL: <https://valxchg.era.nih.gov/valexchange/messageIntakeService>

Database Accessed: **PRODUCTION**

- **Service: Submission of tickets, applications, information requests and status requests**

URL: <https://infoxchg.era.nih.gov/exchange/messageIntakeService>

Database Accessed: **PRODUCTION**

**Test environment:**

- **Service: Submission of tickets, applications, information requests and status requests. For applications, this only validates the application but does not save the application or generate PDF**

URL: <https://valxchg.test.era.nih.gov/valexchange/messageIntakeService>

Database Accessed: **TEST**

- **Service: Submission of tickets, applications, information requests and status requests**

URL: <https://infoxchg.test.era.nih.gov/exchange/messageIntakeService>

Database Accessed: **TEST**

5. NIH currently provides a PDF image of the SOAP package. It would be helpful if the service provider could provide PDF s of “works in progress” without going through the current process. That way a PI could “see” their grant as it was evolving. Such a PDF also could be used by the institution for internal review PRIOR to submission to NIH. The most logical solution would be to render PDFs that are NOT distinguishable from NIHS. There are two possible solutions; implementing both would be preferable:

1. NIH sets up a service where one can submit a SOAP package. It is rendered by NIH using NIH’s servers and a PDF (or an error message) is delivered back to the requesting service provider. This, of course, places a large burden on the NIH servers, but could work in the short term.
2. NIH provides specifications for its PDF rendering engine so that the service provider can duplicate the functionality exactly on its own servers. This is preferable in the long term for load-balancing purposes and in case #1 ever fails. It would require that NIH notify the service providers when the specifications change.

**Answer:**

**It probably would be preferable to have a single rendering service to avoid variations in format. It also should be noted that in the future the format of the electronic form 398 may change and the electronic applications may not be tied totally to the paper format.**

**NIH has provided a TEST database for Service Providers to test their software. The TEST environment will format the image and make it available to the PI.**

**Even in the production environment, the NIH allows the submitter to re-submit the same application as many times as they like BEFORE the deadline. This would allow the PI to view and correct any of the PDF files. In the current set up, the structured data needs to be completed and correct before the application can be submitted. Given the zero-sum game of resources, it looks like it would be preferable for the Service Providers to make sure that the data is correct in such a way the submission can be done early. This would de-facto use the NIH engine to format the PDF and allow the Service Provider and PI to see it. The NIH could then concentrate on adding more application types to the mix rather than use resources for the formatting process.**

**If there is a consensus among stakeholders that the NIH should provide a formatting engine, similar to the validation engine, to process PDF or Word documents files, before the structured data is correct or complete, the request will be evaluated.**

**The question of server load is not a real problem. With the ticket process in place, the NIH server will processes requests on a first-come, first-served basis, without bogging down the production system and database. The user may have to wait a little bit for their turn but the system will not crash. The architecture will scale with volume.**

**NIH has not committed to convert documents to PDF as part of the Exchange process (yet).**

6. In your Commons system, phone/fax number format of (123) 456-7890 is allowed. The person information service of NIH Production server simply reflects the same format. However, in commontypes.xsd schema, PhoneNumberType is in format of either 1234567890 or 123-456-7890. Could this cause validation problem later on?

**Answer:**

**No. The commontypes.xsd schema does not have a pattern facet to enforce the suggested phone number format. So the format received from the person information service should be valid if echoed back in the application data stream. The formats cited (1234567890 or 123-456-7890) are found in a commontypes.xsd schema comment but that comment does not really apply anymore. The comment reflects the fact that we used to have that pattern facet but have since removed it. The erroneous comment should be removed the next time we revise that schema, but for now please ignore it.**

7. When we perform an eRA Person Information Request, we receive the error “Submitting organization is not serviced by the trading partner ({0}).” How should providers and institutions set up a formal working relation so that NIH knows about the relationship (and so that we do not get this error).

**Answer:**

**This error is caused when the SP is not affiliated with the Institution in TRADING\_PARTNER\_AFFILIATIONS\_T. Currently, Krishna Collie enters that information directly into the table. We are looking into automated solutions for handling trading partner affiliations in the future.**

8. We need to put in the previous application number for a revision. For a revision application, where in the XML does the Previous Grant # go? Does it go in the CoreApplicantSubmissionQualifiersType:ApplicationIdentifier element?

**Answer:**

**No. Please refer to the *Mapping of Form PHS 398 to XML Document Structure* document, which is posted on the Partnership page. This will have the answers to most such questions. The revision of application number, which is collected on the 398 checklist page, maps to: ResearchProjectDetails.ResearchApplicationExtension.RevisionOfApplicationNumber. The application number is collected in separate components, as in other cases.**

9. eRA PDF examples (e.g., [http://era.nih.gov/Projectmgmt/SBIR/CGAP/Resources\\_Format\\_Page\\_01-21-04.doc](http://era.nih.gov/Projectmgmt/SBIR/CGAP/Resources_Format_Page_01-21-04.doc)) do not have headers or footers. If the PI submits Footers and Headers, how are they dealt with?

**Answer:**

**They will remain in the generated PDF and will be redundant with the ones we generate when the full grant image is assembled. That is why the PDF boilerplates excluded headers and footers, to encourage submitters to avoid this problem.**

What is the preferred format?

**Answer:**

**Exclude headers and footers. Fill in the templates as shown.**

Should we tell PIs to delete headers and footers?

**Answer:**

**Yes.**

Will NIH eventually number the page numbers for the PDFs automatically?

**Answer:**

**Yes.**