

XSEDE Software Deployment and Retirement Processes for Service Providers

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A. Document History

Relevant Sections	Version	Date	Changes	Author
Entire Document	1.00	09/20/2011	Baseline	XSEDE
Entire Document	1.5	5/1/14	AMT Approval	Janet Brown Victor Hazlewood Greg Peterson

B. Document Scope

The following procedures outline the general process for deploying new software and retiring software that is no longer needed.

C. XSEDE Software Deployment and Retirement Processes for Service Providers

The needs of a large project like XSEDE will change over its lifetime. New software will need to be added to the XSEDE architecture to meet the demands of changing user needs. Similarly, software can become obsolete and will need to be retired. The following procedures outline the general process for deploying new software and retiring software that is no longer needed.

Software Deployment Process

1. Follow established XSEDE Engineering process:
 - a. New needs, capabilities, functions, and fixes are identified and reported;
 - b. Architecture and Design (A&D) develops appropriate use cases and L3 decompositions to meet these new needs and capabilities;
 - c. Software Development and Integration (SD&I) develops specific activities to meet the new architectural specifications; and
 - d. Software that results from completed SD&I activities is passed to Operations, specifically Software Testing and Deployment (ST&D), for evaluation and testing.
2. ST&D puts the software through appropriate testing and evaluations
3. When ST&D determines that the candidate software has passed all tests satisfactorily it notifies the Director of Operations. The Director of Operations signs off on the software as being ready for use.
4. The software is identified as being either “Existing”, meaning that it is an update to some current software, or “New”. The SP Coordinator develops a deployment plan for the software, which includes information such as why Service Providers might want to install the software, descriptions of new or important features, any fixes the software provides, and coordination with other parts of XSEDE (e.g., training).
5. Existing software will be classified as optional or required based on the classification of the previous version. New software becomes part of the collection of “optional” software that the Service Providers may choose to run and is announced to the Service Providers via the SP Forum, the SP Technical Leads, and User Engagement. The software, documentation about it, and instructions for installing it are made available on ***software.xsede.org***.
6. If, after a period of evaluation and review, Operations decides that the new software should be required for Service Providers, they will make the recommendation to XSEDE and complete the following steps:
 - 1) Inform the XSEDE SMT, SP Forum, SP Technical Leads, and User Engagement. Feedback is solicited as to appropriateness, schedule, and effort required.
 - 2) Announce and provide a forum for technical and other discussions about the software. The SP Technical Leads approve the software for required installation by majority vote; dissenting Service Providers may file an Appeal (see Step 11 below). The installation schedule for the software is made available on ***software.xsede.org***.
 - 3) The SMT, SP Forum, and User Services are informed of the pending software installations and any appeals.
 - 4) After the software installation deadline has passed, the SP Coordinator will provide a summary report about the process (what was installed, user impact, problems, effort required, non-compliant Service Providers, etc.) to the SMT, SP Forum, SP Technical Leads, and User Engagement.

It is currently expected that all required software will most likely be open source and would not incur any additional site licensing costs. If exceptions to this do arise, and required

software has associated costs, the funding of such software costs will be addressed by Operations with XSEDE management as part of the deployment planning process for the software. All software deployed in XSEDE requires an XSEDE deployment plan, which will include a section on budget and source of funds, if any additional funds are required.

7. **Appeals:** XSEDE Service Providers are expected to deploy required software and fixes in a timely manner, consistent with their level of membership in the XSEDE Federation. To accommodate occasional special situations and extenuating circumstances, Service Providers who feel that installing required software would cause them undue hardship may file an appeal with the SP Coordinator. This appeal should state the reason(s) for an exception to the required installation. The SP Coordinator will review the Appeal and discuss it with the Director of Operations and the Service Provider's SP Forum Delegate then render a decision. Either the SP Coordinator or SP Forum Delegate will refer extremely difficult situations to the XSEDE Project Director.

Software Retirement Process

1. Software that is a candidate for retirement is proposed.
2. Operations, in consultation with A&D, conduct an evaluation to determine the impact on the XSEDE architecture of retiring the software. Software may be marked as deprecated in anticipation of later retirement.
3. When it has been determined that the candidate software can safely be retired, the Director of Operations is notified and approves the retirement.
4. The SP Coordinator develops a retirement plan for the software, which includes information about why the software is being retired and a schedule for the retirement.
5. The SP Forum, SP Technical Leads, and User Engagement are informed about the impending retirement. Feedback is solicited as to impact, schedule and effort required. Instructions for removal of the software are made available on software.xsede.org.
6. After technical discussions about the proposed retirement, the SP Technical Leads approve the retirement by majority vote. The final retirement schedule for the software is made available on software.xsede.org. Service Providers who wish to continue to operate retired software can do so without XSEDE support (see #11).
7. The SMT, SP Forum, and User Services are informed of the pending retirement.
8. Architecture and Design, Software Development and Integration, and Operations will modify appropriate documents and repositories to re-classify components as retired.
9. Operations works with SD&I to ensure that software is removed cleanly and consistently.
10. After the retirement deadline has passed, the SP Coordinator will provide a summary report about the process (what software was decommissioned, user impact, any problems that arose, non-compliant Service Providers, etc.) to the SMT, SP Forum, SP Technical Leads, and User Engagement.
11. **Appeals:** No appeals are necessary. SPs are free to install, operate and maintain software not on the XSEDE software and services list without XSEDE support.