# XD Service Providers Forum: Charter, Membership, and Governance
### (v10.1_120228)

## Introduction

The National Science Foundation's Office of Cyberinfrastructure (NSF/OCI) coordinates and supports the acquisition, development and provision of state-of-the-art cyberinfrastructure resources, tools and services essential to the conduct of 21st century science and engineering research and education. To support and advance these activities NSF/OCI develops programs and funds projects to provide an extensive cyberinfrastructure (CI). That CI comprises data processing, computing, data storage and networking capabilities, and a range of associated services independently funded by a variety of NSF programs. Further, that CI is augmented and enhanced by facilities and services from campus, regional and commercial providers. Thus our national CI is powered by a broad set of *Service Providers* (SP).

NSF/OCI has recently established the XSEDE project in the context of its *eXtreme Digital* (XD) program to provide integration and coordination across its CI investments, and to amplify the benefits of these investments by delivering to the research community additional human and digital services in the form of tools, expertise, education, and training. One of the tasks undertaken by the XSEDE project was the formation of a *XD Service Providers Forum* (SPF) that will be charged with providing a space for open and inclusive intellectual discussion of topics of interest to the SP community and facilitating a formal communication channel between the Forum members and the Senior Management Team of XSEDE. Working together to integrate these services across the Forum members and XSEDE will advance the scientific productivity of the community in a manner that would be difficult or impossible for the individual SPs to achieve by themselves.

For the services provided by XSEDE to be effective, they will have to interface with the infrastructures and capabilities operated by the SPs. The implementation of such interfaces will be facilitated by cooperation and various degrees of commonality between XSEDE, the SPs and the broader stakeholder community that utilizes these services. The *XSEDE Federation* (XF) includes (among others) those providers and consumers of services which will meet, to varying degrees, the requirements of those interfaces and also will engage in the effective and sustained interactions required to develop and evolve those interfaces.

While the Service Provider Forum is chartered to fulfill certain XSEDE-specific requirements and goals and while SPs may have Cooperate Agreements (CA) with the NSF that mandate their interaction with XSEDE as members of the XSEDE Federation, the forum will be open to any Service Provider that sees value in exchanging experiences, sharing best practices and in leveraging the common tools and capabilities offered by XSEDE and thus become an active element in the national Cyberinfrastructure ecosystem.

The remainder of this document defines the SPF and associated organizations and procedures:

- Service Providers
- The XSEDE Federation
- The Service Provider Forum
- SPF Charter
- Process for a Service Provider to join the Service Provider Forum
- Service Provider Forum Governance and Bylaws

## The Interim Service Providers Forum and the Creation of this Document

In order to initiate the process of formally instantiating the Service Providers Forum and develop this document, XSEDE management selected an Interim Service Providers Forum.  The purpose of this Interim Forum was to develop the charter, bylaws and related governance documentation represented by this document.  The membership of the Interim Forum was selected based on the anticipation that they would be Level 1 or Level 2 SPs (see below) when the SPF was formally instantiated, and that they had experience or important points of view in the type of governance represented by XSEDE and the SPF.  The members of the Interim Service Provider's Forum are:

| Name | Institution | Resource/Service |
|---|---|---|
| Carol Song, *Interim Chair* | Purdue | Steele |
| Sean Ahern | Univ of Tennessee-Knoxville/NICS | RDAV/Nautilus |
| Jay Boisseau | Univ of Texas-Austin/TACC | Ranger/Spur/Ranch |
| Mark Fahey | Univ of Tennessee-Knoxville/NICS | Kraken |
| Geoffrey Fox | Indiana Univ | FutureGrid |
| Kelly Gaither | Univ of Texas-Austin/TACC | Longhorn |
| Mike Levine | PSC | Blacklight |
| Miron Livny | Univ of Wisconsin | OSG |
| Honggao Liu | LSU | QueenBee |
| Rich Loft | NCAR | Frost |
| Michael Norman | UCSD/SDSC | Gordon |
| Richard Moore | UCSD/SDSC | Trestles |
| Craig Stewart | Indiana Univ | Quarry |
| John Towns | Univ of Illinois/NCSA | Forge/Ember/MSS |
| Jeffrey Vetter | Georgia Tech | Keeneland |

## Service Providers

Service Providers (SPs) are independently funded organizations that provide cyberinfrastructure services to the science and engineering community and that may meet the XF membership criteria defined below.

Service Providers are funded by autonomous NSF awards, other funding agencies, or local campuses to provide their services to their community. (Note that several organizations are Service Providers and are also participants in the XSEDE award; their role as a Service Provider is considered here separately from their direct role in the XSEDE program.) It is the autonomous nature of the funding to Service Providers, which demands a careful description of the relationship between SPs that are part of the XSEDE Federation and the XSEDE project.

## The XSEDE Federation

The extended organization created by the amalgamation of the XSEDE program and other separately funded bodies with which XSEDE collaborates or otherwise has a formal relationship with is referred to as the *XSEDE Federation* (XF). All formal relationships with XSEDE will be documented via agreements that must cover a wide spectrum in both the services and responsibilities involved. Many of these agreements will be specific to the particular partner. Some partner organizations within the XSEDE Federation will not fall within the Service Provider designation; in particular, XSEDE will need to interact with other XSEDE-like organizations as peers. There are already such examples both within the United States and internationally (e.g., PRACE).

Multiple types of Service Providers are defined below in order to encourage participation in the Federation and to balance the need for clear expectations of service levels with the desire to be flexible. The overarching goal of the XF with respect to service providers is to encourage service providers to bring new and innovative services to XSEDE while not being overly burdensome with respect to process and requirements. Clearly defined service levels and an operational framework for partnering relationships will encourage broader participation, expand the services available to the community, and form the underpinnings of a pervasive national cyberinfrastructure ecosystem.

Service Providers that are part of the Federation may be involved in a variety of ways. For example many NSF/OCI awards (e.g., Track 2, RDAV, DCL) mandate that awardees make their services available through XSEDE at the highest level of integration. However, some institutions may want to voluntarily make their services (e.g., large campus clusters, data repositories) available via XSEDE without being mandated by NSF to do so, and they may prefer to meet all or only some of the requirements (e.g., perhaps only a shared network link versus dedicated 10 Gb/s connectivity). This section describes a flexible construct for SP participation in the XSEDE Federation. The expectation is that some SPs will choose to support some XSEDE capabilities, but more interestingly, will enable access by researchers to new or expanded capabilities not available within the current XSEDE Federation or will augment oversubscribed services. Hence, the full compatibility requirements applied to, e.g., the NSF-mandated awardees, will not be required of all XSEDE Federation SPs. This flexibility lays the foundation for broader participation in the Federation of campus, regional and other cyberinfrastructure efforts in NSF's national cyberinfrastructure.

Three Levels[1] of Service Providers within the XSEDE Federation are defined. Of central importance is that all SPs who are members of the XSEDE Federation have an explicit voice in how the XSEDE architecture evolves to further support the needs of all stakeholders. SPs are classified as being at a specific Level by meeting a minimum set of conditions. They may meet additional conditions at their option, but classification at a specific Level will be based on the stated required minimum conditions. "Level 1" Service Providers meet all XSEDE integration requirements and will explicitly share digital services with the broader community of researchers supported by the XSEDE environment and infrastructure, with access to those digital services made available through the XSEDE allocation process. "Level 2" Service Providers make one or more digital services accessible via XSEDE services and interfaces, share one or more digital services with the XSEDE community along with the organization's local users, and meet a subset of the requirements for Level 1 Providers. Level 2 SPs have exposure to a broader audience, can leverage significant XSEDE-provided infrastructure and services in meeting their objectives, and have the option of using the XSEDE allocation process to provide access to the digital services they provide. "Level 3" Service Providers are the most loosely coupled within the XSEDE Federation; they will advertise the characteristics of one or more digital services via XSEDE mechanisms, might make those resources or services accessible via XSEDE compatible interfaces but need not make digital services available "locally" via XSEDE services or interfaces, and are not required to share services with the XSEDE user community. Most critically, Level 3 SPs are an important way for making the community aware of rich resources that exist beyond the formal structure of the XSEDE program and the services provided by the Level 1 and 2 SPs, and providing a means for much broader input into the XSEDE governance process. The requirements for qualification at the three Levels are summarized below and described more completely in Article 4.f of the Bylaws.

---

[1] Throughout this document, the word "Level" is spelled with an initial-capital when it refers to Levels of Service Providers within the SP Forum, and without an initial-capital when it does not refer to this specific context.

Table 1 provides a high-level summary of the technical requirements and mutual expectations of XSEDE Federation SPs and XSEDE at the three Levels. A complete description of these requirements and expectations, as well as procedures for Service Providers to meet these requirements, has been developed by the XSEDE program team in two documents entitled the *XSEDE SP Software and Services Baseline* and the *XSEDE Technical Security Baseline*. Current versions of these documents are maintained on the XSEDE website at: https://www.xsede.org/publications.

**Table 1: Summary of Requirements and Expectations for XSEDE and XSEDE Federation SPs**

| | SP Level | | |
| --- | --- | --- | --- |
| **Expectations of XSEDE by XSEDE Federation Service Providers** | **Level 1** | **Level 2** | **Level 3** |
| *Technical Expectations* | | | |
| XSEDE will publish information on the digital service/resource via XSEDE Information Services | Yes | Yes | Yes |
| XSEDE will provide the SP opportunities to participate in training, workshop, and conference activities | Yes | Yes | Yes |
| XSEDE will monitor XSEDE-compatible services by XSEDE Operations | Yes | Yes | No |
| XSEDE will provide access to XSEDEnet to the SP | 10Gb/s | Optional | No |
| XSEDE will provide XSEDE Accounting/Account Management Services to the SP | Yes | Yes | No |
| *Support* | | | |
| XSEDE will provide support for XSEDE client and server software (XSS) installed at the SP | Yes | Yes | No |
| XSEDE will provide SP access to the XSEDE Ticket System | Yes | Yes | No |
| XSEDE will work with the SP to provide User Support for provided digital service | Yes | No | No |
| XSEDE will route incoming tickets to SP via XSEDE Ticket System | Yes | Yes | No |
| Coordination between XSEDE and SP training, education, and outreach goals | Yes | Optional | No |

| | SP Level | | |
| --- | --- | --- | --- |
| **Expectations of XSEDE Federation Service Providers by XSEDE** | **Level 1** | **Level 2** | **Level 3** |
| *Technical Expectations* | | | |
| SP will provide and maintain digital service/resource info in XSEDE Information Services | Yes | Yes | Yes |
| SP will provide documentation and training materials for XSEDE compatible services offered | Yes | Yes | Optional |
| SP will provide training and workshops to XSEDE user community | Yes | Optional | Optional |
| SP will attend the annual XSEDE conference | Yes | Yes | Optional |
| SP will provide access to XSEDE-compatible digital service/resource for monitoring by XSEDE Operations | Yes | Yes | No |
| SP will provide XSEDEnet connectivity to its users | Dedicated 10Gb/s | Optional | No |
| SP will participate in XSEDE Accounting/Account Management Services | Yes | Yes | No |
| SP will actively participate in XSEDE Operations as appropriate for the service | Yes | Yes | No |
| SP will provide the necessary information, human resources, and technology to comply with XSEDE security, accounting, allocation, user support, and other services | Yes | Yes | No |
| *Support* | | | |
| SP will install and maintain appropriate XSEDE Software and Services (XSS). (Documentation of the XSS is currently defined in the *XSEDE SP Software and Services Baseline* and the *XSEDE Technical Security Baseline noted above*) | Yes | Partial | No |
| SP will route higher-level XSEDE tickets to XSEDE via XSEDE Ticket System | Yes | Yes | No |
| SP will provide User Support for provided digital service | Yes | Optional | No |
| Coordination between XSEDE and SP training, education and outreach goals | Yes | Optional | No |

# The Service Provider Forum

As described above, the SPF serves multiple purposes. While it has been established to engage a broad community of SPs, it *must* provide an effective forum for interaction between the XSEDE program and the SPs that engage directly with the XSEDE program (i.e. members of the XSEDE Federation). The SPF provides a space for open and inclusive intellectual discussion of topics of interest to Service Providers across the CI ecosystem, including SPs that may not be formal members of the XSEDE Federation, will not interfere with the needs of XSEDE with respect to the Federation as defined by the XSEDE Senior Management Team. To support the diversity of interaction among the SPs and between the SPs and the XSEDE program, the SPF is structured as a tiered organization, recognizing the different levels of involvement of various SPs in the XF.

There are two categories of Service Providers in the SPF – those that are or are not part of the XSEDE Federation. Service Providers that interact directly with the XSEDE program are members of the XSEDE Federation and this will be formalized via a documented agreement between the SP and the XSEDE program as described above.

In the SPF context, as with XSEDE, an SP would generally be associated with an *award* or *funding agreement*, representing specific services and/or resources. For example, even though *Kraken*, *Nautilus,* and *Keeneland* are all resources co-located and operated by staff at NICS, there are three distinct awards associated with these resources, and thus there are three different SPs associated with these resources. Alternatively, though *Ranger*, *Spur,* and *Ranch* are distinct digital services at TACC, they are all supported as part of a single award and thus are considered a single SP. However if an institution has multiple awards or distinct funding sources that are separately associated with distinct services, the institution can request that these awards or distinct funding sources be considered collectively as a single SP. For example, if a university wanted to bring both a campus-funded service and a distinct NSF-funded resource to the XSEDE Federation, by default these would be considered distinct SPs, but the institution could request that these services be considered part of a single SP. In any case, a Service Provider is categorized at only one Level, the highest Level for which they qualify. Any conflict with respect to the connection between an award, the provided service, and the state of being an SP in the XSEDE Federation may be resolved through discussions with the SPF Chair and the XSEDE Project Director.

# Service Providers Forum Charter

The Service Providers Forum (SPF) is created to establish effective communications and coordination amongst Service Providers and between Service Providers and the larger NSF XD (eXtreme Digital) program and to facilitate the fulfillment of bilateral responsibilities between the XSEDE program and the Service Providers within the XSEDE Federation. The SPF will be inclusive of a broad range of digital service providers interested in leveraging XSEDE infrastructures and working collaboratively to provide greater collective value to the computational and data-enabled science and engineering research and education community. The SPF constitutes a key set of partners in XSEDE's mission to enhance the productivity of scientists and engineers by providing them with new and innovative capabilities that facilitate scientific discovery, enable transformational science and engineering, and offer innovative educational programs.

The SPF is chartered by the XSEDE project as a forum for Service Providers that deliver services via XSEDE or interact with XSEDE (i.e. SPs in the XSEDE Federation). This section sets out the activities that are to be carried out by the SPF under this charter from XSEDE, the mutual obligations between XSEDE and SPF members at various Levels, and activities that the SPF may take on beyond its brief from XSEDE management.

Expanding this last point, the Charter of the Service Providers Forum has a wider reach than just XSEDE. Though XSEDE plays a coordinating role within the larger XD program, the NSF expects the XD program to provide services

that compose a broader CI. With this vision in mind, the SPF not only fulfills certain project requirements and goals for XSEDE, but is also a body for communication among the providers in a manner that transcends XSEDE.

The SPF provides a means by which Service Providers have input into XSEDE's management, and provides a venue via which XSEDE management may communicate effectively with SPs in the XSEDE Federation. In particular, the SPF provides an effective vehicle via which SPF members can voice concerns, make recommendations, and provide feedback on proposed changes and XSEDE management can discuss requirements and proposed changes in the XSEDE environment and services (particularly those that would impact the SP's operation of their digital service).

The charge given the SPF from XSEDE is as follows:

    a.  the SPF will provide feedback and recommendations to XSEDE regarding plans and objectives;
    b.  the SPF will actively collect and provide to XSEDE the needs of the SPs in support of XSEDE's requirements collection process;
    c.  members of the SPF will participate in the XSEDE User Requirements Evaluations and Prioritization committee to support the selection and prioritization of requirements to be adopted by XSEDE;
    d.  members of the SPF will participate in reviews and evaluations of architectural design, implementation, and deployment of capabilities intended to support the prioritized requirements;
    e.  each SP that is a member of the XSEDE Federation (and hence categorized as a Level 1, 2 or 3 SP) will meet its obligations to XSEDE as outlined in their separately-executed agreements (see below);
    f.  members of the SPF will coordinate joint reporting and reviews with XSEDE as required by NSF.

XSEDE makes the following commitments to the SPF as regards SPF activities relative to its charge from XSEDE:

1. the Chair of the SPF (selected subject to certain constraints described below) will be a full member of the XSEDE Senior Management Team (SMT);
2. the Chair of the SPF, along with two additional members of the SPF (subject to certain constraints), will be members of the XSEDE Advisory Board;
3. XSEDE will provide a response to all recommendations made by the SPF to XSEDE, giving them due consideration given the significance of the stakeholder group representing those recommendations;
4. all needs collected and submitted by the SPF to the XSEDE requirements management process will be properly addressed with SPF involvement at many steps along the way (see expectations of the SPF above) as important stakeholders;
5. XSEDE will meet its obligations to each SP in the XSEDE Federation (and hence categorized as a Level 1, 2 or 3 SP) as outlined in their separately-executed agreements (see below).

The SPF must meet the XSEDE-related charter as defined above, and the commitments made above regarding XSEDE management's obligations to the SPF are specifically with the SPF XSEDE Federation members who are Level 1, 2, or 3 SPs with that status acquired via execution of an agreement with XSEDE (see below). However the SPF may expand its charter, membership and responsibilities beyond just matters related to XSEDE to address a broader range of cyberinfrastructure issues. This will provide an additional mechanism by which this broader stakeholder group can actively contribute to the XSEDE project and the wider XD cyberinfrastructure effort. When acting in this more expansive, self-chartered capacity, the SPF is an organization that is fully autonomous from XSEDE, as are many other organizations within the cyberinfrastructure and computational science & engineering communities.

## Process for a Service Provider to join the Service Provider Forum

Every prospective member of the SPF must apply to join the SP Forum. Once admitted to the Forum, the SP may join the XSEDE Federation by executing an agreement with the XSEDE project. This process is described here with

additional detail in Articles 3 and 4 of the Bylaws below. Given the special relationship between the SPF and the XSEDE project, an SP that opts to join the SPF will be automatically considered as a member of the SPF as long as the SP is a member (in good standing) of the XSEDE Federation. It is expected the members of the XF will explicitly apply for membership in the SPF.

The application process is established to clearly define mutual expectations up-front for participation in the SPF and the XF, ensure that participation is at the appropriate Level for all parties involved and to provide a mechanism to ensure that NSF's goals are being met within the limitations of the allocated funding. While it may involve substantial work (particularly for Level 1 or 2 SPs), every effort will be made to expeditiously process the applications.

A potential Service Provider interested in joining the Service Providers Forum (SPF) should review this document and other related documentation on the SPF web site (https://www.xsede.org/web/sp-forum), and then contact the SPF Chair (spf-chair@xsede.org) to discuss their interest and evaluate potential Level of participation in the XSEDE Federation. A formal written application should be submitted electronically to the SPF Chair and must contain the information regarding the prospective SP's organization and activities as described in Article 4 of the SPF Bylaws (below). The specific process for new applications is detailed in Article 3 of the SPF Bylaws, and the process to change Level, leave the XF, or to leave the SPF is detailed in Article 5 of the Bylaws.

The SPF Chair will conduct a preliminary screening of the initial application to ensure that there is a clear understanding with the prospective Service Provider and that the application is complete. The SP will be automatically considered as a member of the SPF as long as the SP is a member (in good standing) of the XSEDE Federation. If the prospective SP is not a member of the XF, the SPF Chair will then bring the application to the SP Forum for a "non-XSEDE-related" vote (see Article 2 of Bylaws). The SPF Chair will inform the SP and the XSEDE Project Director of the outcome of the vote; if the application is not approved, the SPF Chair will provide a rationale for this decision to the applicant.

For SPs that wish to join the XSEDE Federation, the SPF Chair will forward the application to the XSEDE Project Director (or his delegate), who will work with the prospective Service Provider to develop a mutually acceptable agreement describing the interactions and expectations between XSEDE and the Service Provider. These agreements recognize the need for SPs to act with autonomy to satisfy the terms and requirements of their own cooperative agreements, supporting institutions, funding agencies, and other stakeholders, but also clearly delineate the expectations that both XSEDE and the SP have as part of the relationship. The XSEDE Project Director and the SP will jointly develop this agreement, subject to approval by NSF or other stakeholders as required. (It is expected that NSF will review the agreements for all Level 1 SPs.) Agreement templates for each of the 3 Levels will be developed and serve as the starting point for developing specific agreements; templates or redacted examples will be made available to prospective SPs by the XSEDE Project Director or the SPF Chair. The XSEDE Project Director will notify the SPF Chair when an agreement is successfully completed.

If the SP and the XSEDE Project Director are unsuccessful in reaching an agreement, the XSEDE Project Director will notify the SPF Chair of this outcome, along with a recommendation for proceeding forward. In these circumstances, it is expected that the SP, the XSEDE Project Director and the SPF Chair will jointly determine a satisfactory course of action.

## Service Providers Forum Governance and Bylaws

This section describes elements of governance for the Service Providers Forum as defined in the Bylaws below.

To assure representation of SPs that are part of the XSEDE Federation in the XSEDE project, there are two important connections between the SP Forum and the XSEDE governance structure. First, the Chair of the SPF is a full voting member of the XSEDE Senior Management Team and will participate in their regular meetings. Substantive mutual interactions between the SPF and the XSEDE SMT are vital to the success of the XSEDE Federation. This provides a direct conduit to the day-to-day management of XSEDE. It is the responsibility of the SPF Chair to provide input into the management of XSEDE on behalf of the SPF and present issues, recommendations, and feedback on proposed changes to the XSEDE environment to XSEDE management.

The second connection to XSEDE governance is that the SPF Chair and two additional SPF representatives selected by the SPF from the Forum membership will be members of the XSEDE Advisory Board (XAB). The selection process is outlined below in Article 1. Organization. The XAB will provide guidance to the XSEDE SMT to help XSEDE achieve the maximum impact across diverse scientific disciplines and communities. This board will assist with requirements gathering, prioritizing requirements, and development efforts in the annual planning process, review the annual report and plans to NSF, and recommend strategic directions.

## Article 1. Organization

a. The SP Forum will elect from among its members four positions: the SPF Chair, the SPF Vice-Chair, and two representatives to the XSEDE Advisory Board (XAB). Voting procedures are described in Article 2. Each election is for a one-year term; there are no term limits; elections will be held at the first meeting of each calendar year. The elected SPF Chair is a representative to the XAB and hence the SP Forum will have a total of three XAB representatives. The Vice-Chair may also stand for election as one of the two additional representatives to the XAB.

b. Each of the SPF Chair, Vice-Chair, and the two representatives (in addition to the SPF Chair) to the XSEDE Advisory Board must have a Level 1, 2, or 3 SP at their home institution.

c. To avoid potential conflicts of interest, the SPF Chair, Vice-Chair and the two XAB representatives cannot have their primary appointment in any center, institute, or similar organization otherwise already represented within the XSEDE SMT. (For example, while NICS is an XSEDE Service Provider, the NICS SPF representative cannot hold any of the four elected SPF positions since the XSEDE Director of Operations is from NICS and is a voting member of the XSEDE SMT.)

d. The group of Level 2 Service Providers will annually self-elect at the first meeting of each calendar year a "Level 2 Chair" and up to two at-large Level 2 representatives who will have voting rights within the SP Forum on XSEDE-related issues.

e. The group of Level 3 Service Providers will annually self-elect at the first meeting of each calendar year a "Level 3 Chair" who will have voting rights within the SP Forum on XSEDE-related issues.

f. The SPF Chair will distribute meeting notices in a timely way, distribute agendas in advance of meetings, and distribute minutes of substantive actions or decisions to the SP Forum.

g. The SPF Chair will create committees and working groups, with leads, as necessary to perform the work of the SPF.

h. The SPF Vice-Chair will assume the duties of the Chair and complete the Chair's term if the Chair is unable to fulfill the duties or resigns. The Vice-Chair will also substitute for the Chair in SPF or SMT meetings if the SPF Chair is not available.

i. The SPF Chair will provide written information to the XSEDE SMT regarding the results of meetings, including any recommendations and/or action items that need attention by XSEDE and the timeframe for the action.

j. The XSEDE SMT will formally communicate with the SPF via the SPF Chair, including any recommendations and/or action items that need attention by the SPF and the timeframe for the action.

# Article 2. Service Providers Forum Membership and Voting

a. Membership in the Service Providers Forum (SPF) is open to Service Providers, as defined in the "Definition of Service Providers in the Service Provider Forum"" section, who submit an application that is approved as described in Article 3 of these Bylaws.

b. A list of SPs who are members of the SPF will be maintained on the SPF wiki (https://www.xsede.org/web/sp-forum ) and a list of SPs who are members of XF will be maintained on the xsede.org website (https://www.xsede.org/partnerships ).

c. All SPs are expected to actively participate in SPF meetings, conference calls and email discussions.

d. Any SP that has participated (via telcon or in person) in less than 50% of the SPF meetings over a 1-year span will have its membership reconsidered.

e. The SPF Chair is responsible for ensuring that the Forum meets as often as necessary to address the business of the SP Forum, but no less frequent than quarterly.

f. It is anticipated that an in-person SPF meeting will occur at the annual XSEDE conference, with all SPs at Levels 1 and 2 expected to attend and all other SPs encouraged to attend.

g. All SPs are welcome and encouraged to participate in all SPF events and discussions as non-voting participants.

h. SPF Forum members must have an approved application prior to being allowed to participate in voting activities of the SPF.

i. A valid vote requires a quorum of 2/3 of the total number of members who are eligible to vote on a given issue (see below). If the total number of votes cast does not meet this threshold, the item is tabled until a further SPF meeting.

j. A simple majority of the SPF members that vote is required to approve an item, activity or motion of the SPF.

k. There are three possible votes that an eligible member can cast: YES, NO, ABSTAIN. A vote of YES is in support of the item. A vote of NO is a vote to NOT support the item. A vote of ABSTAIN is a vote neither for nor against the item and removes the organization abstaining from the vote from the count of eligible members.

l. Elections and votes may be performed in person, via telcon or by electronic means (e.g., email, doodle poll, etc.) as determined by the SPF Chair or, when appropriate, the Level 2 or Level 3 Chair. Any voting member of the SP may designate an alternate to vote if the voting member is not available.

m. There are two types of voting procedures within the SPF depending whether or not the issue being voted on is "XSEDE-related." Any item that directly impacts the interactions between SPs and the XSEDE program is an XSEDE-related issue. The SPF Chair determines which type of voting procedure is appropriate for the issue under consideration.

n. For XSEDE-related issues, the following SPF members are eligible to vote:
    a. each Level 1 Service Provider;
    b. the Level 2 Chair and up to two at-large Level 2 representatives; and
    c. the Level 3 Chair.

o. For issues that are not XSEDE-related, all SPF members are eligible to vote.
    a. However, for such issues, the quorum for a valid vote is 2/3 of all Level 1, 2 and 3 SPs.

p. The following issues are always subject to a vote of the SPF; the expected voting procedure is listed in parentheses. This list is illustrative of the types of activities that may be voted upon and is not intended to be comprehensive:
    a. Applications for new members. (Not XSEDE-related)
    b. Election of the SPF Chair, Vice-Chair, and XSEDE Advisory Board representatives. (XSEDE-related)
    c. Election of the Level 2 Chair and at-large Level 2 representatives. (XSEDE-related but all Level 2 SPs may vote, and only Level 2 SPs may vote)
    d. Election of the Level 3 Chair. (XSEDE-related but all Level 3 SPs may vote, and only Level 3 SPs may vote)

> e. Recommendations for changes to the SPF Charter that significantly impact the interactions between XSEDE and the SPF (XSEDE-related and must be subsequently submitted to the XSEDE SMT for approval).
>
> f. Changes to the SPF Charter that do not significantly impact the interactions between XSEDE and the SPF. (Not XSEDE-related)
>
> g. Major recommendations from the SPF to XSEDE, NSF, or other stakeholders. (TBD, depending whether the issue is XSEDE-related)
>
> h. Major policies that impact SPF members. (TBD, depending whether the issue is XSEDE-related)

q. Elections: elections for all position below follow the XSEDE-related voting procedures (Articles 2.n-2.o) and a separate election is held for each type of position listed below:

> a. SPF Chair: The SPF Chair will be selected by election amongst interested Level 1, 2 or 3 SPs. After voting, the candidate with the most votes will become the SPF Chair.
>
> b. SPF Vice-Chair: The SPF Chair will be selected by election amongst interested Level 1, 2 or 3 SPs. After voting, the candidate with the most votes will become the SPF Vice-Chair.
>
> c. Additional XAB representatives (beyond SPF Chair): The two representatives (in addition to the SPF Chair) to the XSEDE Advisory Board selected by election amongst interested Level 1, 2 or 3 SPs. Each of the SPs eligible to vote will cast two votes for candidates. After voting, the two candidates with the most votes will become the XAB at-large representatives. Note that the SPF Vice-Chair may also be considered for candidacy in this election.
>
> d. Level 2 Chair: The Level 2 Chair will be selected by election amongst interested Level 2 SPs. All eligible level 2 SPs and only eligible Level 2 SPs may vote in this election. After voting, the candidate with the most votes will become the Level 2 Chair.
>
> e. At-large Level 2 voting members: The at-large Level 2 voting SPs will be selected by election amongst interested Level 2 SPs. All eligible level 2 SPs and only eligible Level 2 SPs may vote in this election. After voting, the two candidates with the most votes will become the at-large Level 2 voting SPs.
>
> f. Level 3 Chair: The Level 3 Chair will be selected by election amongst interested Level 3 SPs. All eligible level 3 SPs and only eligible Level 3 SPs may vote in this election. After voting, the candidate with the most votes will become the Level 3 Chair.

## Article 3. Procedure for Service Providers to Join the Service Providers Forum

a. Prospective members of the SPF are encouraged to first contact the SPF Chair (spf-chair@xsede.org) to discuss their interest and evaluate the appropriate category and Level of participation.

b. Prospective members of the SPF must electronically submit a new member application to the SPF Chair (spf-chair@xsede.org) that provides all of the information specified in Article 4 of the SPF Bylaws.

c. The evaluation of a new member application is based upon the combined merits, considering all of the criteria in SPF Article 4.f and Article 4.g (i.e., no single criterion is a litmus test).

d. If the prospective SP is a member of the XSEDE Federation, they are automatically considered a member of the SPF and become a member of the SPF at the Level corresponding to their agreement with XSEDE.

e. If the prospective SP is not a member of the XSEDE Federation, the SPF Chair will bring the application to the SP Forum for a "non-XSEDE-related" vote. The SPF Chair informs the SP and the XSEDE Project Director of the outcome of the vote; if the application is not approved, the SPF Chair will provide a rationale for this decision to the applicant.

f. For applications that request membership in the XSEDE Federation (i.e. Level 1, 2 or 3), the SPF Chair will forward the application to the XSEDE Project Director with a request that the Service Provider and XSEDE Project Director (or his delegate) develop a mutually acceptable agreement describing the interactions and expectations between XSEDE and the Service Provider.

g. The XSEDE Project Director will notify the SPF Chair when an agreement is successfully completed. When completed, the SP member becomes a member of the SPF at the Level corresponding to their agreement with XSEDE.

h. If the SP and the XSEDE Project Director are unsuccessful in reaching an agreement, the XSEDE Project Director will notify the SPF Chair of this outcome. In this case, the SPF member remains a non-Level 1/2/3 member of the SPF.

i. It is expected that the processing and notification of a new member application shall be within no more than 30 days upon receipt of the completed application.

## Article 4. Criteria for New SPF Member Applications

As described in Article 3, any organization wishing to join the SPF must electronically submit a written application (a template is available on the SPF wiki, https://www.xsede.org/web/sp-forum) to the SPF Chair and provide the following information about their organization and its activities so that the application can be considered via the process specified in Article 3:

a. Name of organization/award

b. Organization's affiliation (if any) with an academic or government institution

c. Location of organization, including full postal address

d. URL for organization's web site

e. Lead person at organization and at least one alternate (Include name, postal address, email address, telephone, and fax).

f. Whether or not the application is to be an SP within the XSEDE Federation. If the application is to be a member of the XSEDE Federation, specify what Level of SP is requested. If the SP is already a member of the XSEDE Federation, indicate the Level of the agreement in place with XSEDE.

g. If an approved application would result in aggregating more than one SP at an institution, a description of the distinctions in funding sources, operations and user communities between the multiple SPs at the institution and rational for aggregation.

h. For XSEDE Federation applications, the application should specify how the applicant meets the required conditions of being a Level 1, 2 or 3 SP. SPs may choose to support characteristics from higher Levels, but an SP may only qualify for a given Level when all of the minimum requirements for that Level are satisfied. These conditions are:

   1. An SP may be classified as Level 1 in the following ways:

      a. NSF Mandate: NSF may choose to mandate to an SP that it is to be an XSEDE Level 1 SP. This is a sufficient condition to qualify them for classification at this Level. In such cases, the SP is expected to comply with the requirements of Level 1 as appropriate in light of the nature of the digital service offered.

      b. Satisfying all of the following conditions is sufficient to qualify an SP for classification at Level 1:

         a. The SP provides one or more digital services available to the general XSEDE community;

         b. The service(s) substantially augments the digital services already available to XSEDE;

         c. Access to those digital services must be made available through the XSEDE allocation process; and

         d. The SP provides "full" integration into and support of the XSEDE environment and conformance to the "Production Baseline" as currently described in two documents entitled the *XSEDE SP Software and Services Baseline* and the *XSEDE Technical Security Baseline* . (Current versions of these documents are available at: https://www.xsede.org/publications; these and any other documents will be living documents with current versions maintained on this page.)

2. An SP may be classified as Level 2 in the following ways:
   a. NSF Mandate: NSF may mandate to an NSF-funded SP that it is to be an XSEDE Level 2 SP. This is a sufficient condition to qualify them for classification at this Level. In such cases, the SP is expected to comply with the requirements of Level 2 as appropriate in light of the nature of the digital service offered.
   b. Satisfying all of the following conditions is sufficient to qualify an SP for classification at Level 2.
      a. The SP provides one or more digital services to the general XSEDE community;
      b. The service substantially augments the digital services already available to XSEDE;
      c. Access to those digital services may be made available through the XSEDE allocation process; and
      d. The SP provides "partial" integration into and support of the XSEDE environment and conformance to the "Production Baseline" as currently described in two documents entitled the *XSEDE SP Software and Services Baseline* and the *XSEDE Technical Security Baseline*. (Current versions of these documents are available at: https://www.xsede.org/publications; these and any other documents will be living documents with current versions maintained on this page.)
3. An SP may be classified as Level 3 in the following ways:
   a. NSF Mandate: NSF may mandate to an NSF-funded SP that it is to be an XSEDE Level 3 SP. In such cases, if the SP is providing a digital service, the SP is expected to comply with the requirements of that Level as appropriate in light of the nature of the digital service offered.
   b. Campus Champions: Membership and participation in the XSEDE Campus Champions Program qualifies an institution as an SP at Level 3. The SP is expected to comply with the requirements of Level 2 as appropriate in light of the nature of the digital service offered.
   c. Co-branding: It is sufficient to qualify an SP for classification at Level 3 if a prospective SP provides the specified information regarding the organization, the communities it serves, and the digital services it offers via the XSEDE information services directory. Specific information is provided in the "Production Baseline" documents referenced above.

i. Each of the following criteria also factor into the evaluation of a new member application. An applying organization should describe its capabilities and activities that address each of the criteria.
   1. Organizational objective to provide resources and/or services to the XSEDE community (Level 1 or Level 2) and its local users or to register resources or services in XSEDE information services (Level 3).
   2. Specify the type of services, activities and contributions the organization plans to have in the XSEDE community.

## Article 5. Process for Changing the Status of Existing SPF Members

a. It is strongly encouraged that SPs initiate status change requests when appropriate rather than require the SPF Chair or XSEDE Project Director to initiate involuntary changes.
b. A change in status of existing members may include a Service Provider changing Levels or leaving the SP Forum. This can occur if the Service Provider no longer offers the service that was the basis for their initial

application to the SPF, wishes to change its Level of service, or does not meet the requirements for participation at that Level. For NSF-mandated SPs, the presumption is that the SP should change status no later than the end date of their NSF award. It could also occur if the Service Provider now meets requirements that it did not satisfy earlier.

c. A Service Provider can request a change in status at any time (subject to constraints from NSF awards). For straightforward requests to leave the SPF, the SPF Chair has the authority to approve the request without further discussion, and the SPF Chair will notify the SP Forum and the XSEDE Project Director. For a request to change Levels a written request should be submitted electronically to the XSEDE Project Director with the nature of the request and the rationale; if appropriate, information listed in Article 4 of these Bylaws should be included.

d. Either the XSEDE Project Director or the SPF Chair can initiate a process that results in the involuntary change in status of an SP.

e. In order to retain membership as an XSEDE Federation SP at a given Level, organizations must maintain the services and/or resources and fulfill the participation requirements as described in their agreement with XSEDE and Article 2 of these Bylaws.

f. If there is an issue regarding an SP not meeting the agreement requirements, the XSEDE Project Director or their delegate will investigate the situation and report back their findings in writing to the SP in question and the XSEDE SMT. The SP in question will then be afforded an opportunity to make a formal response in writing to the XSEDE SMT regarding the question of the SP status and fulfillment of the agreement with XSEDE. In the event that the XSEDE Project Director or their delegate determines that the terms of the agreement have not been satisfied, the XSEDE Project Director will initiate a vote of the XSEDE SMT to involuntarily remove that member from the XSEDE Federation or change Levels. If such a vote passes, the XSEDE Project Director will inform the SP in question and the SPF Chair of the XSEDE SMT decision.

g. The SPF Chair can initiate an involuntary change in membership status if it is clear that the SP is no longer meeting the levels of active participation in the SP Forum as specified in Article 2.

h. After processing a change in status, the SPF Chair will notify the SPF and the XSEDE Project Director.

i. Organizations that are removed as SPF members shall be reconsidered for future membership at such time as they again meet the membership criteria and reapply to join the SPF.

# Document Voting Results

A vote to approve this document was conducted via email with results collected by the Chair of the Interim SP Forum, Carol Song.  The results of that voting are:

| | | | | |
|---|---|---|---|---|
| Steele/Condor Pool | Purdue | Carol Song | Preston Smith | YES |
| RDAV/Nautilus | Univ of Tennessee-Knoxville/NICS | Sean Ahern | Jian Huang | YES |
| Ranger/Spur/Ranch | Univ of Texas-Austin/TACC | Jay Boisseau | Chris Hempel | YES |
| Kraken | Univ of Tennessee-Knoxville/NICS | Thomas Zacharia | Mark Fahey | YES |
| FutureGrid | Indiana Univ | Geoffrey Fox | Gary Miksik | YES |
| Longhorn | Univ of Texas-Austin/TACC | Kelly Gaither | ???? | YES |
| Blacklight | PSC | Mike Levine | Bob Stock | YES |
| OSG | Univ of Wisconsin | Miron Livny | ???? | YES |
| QueenBee | LSU | Honggao Liu | Jim Lupo | YES |
| Frost | NCAR | Rich Loft | ???? | YES |
| Gordon | UCSD/SDSC | Michael Norman | Shawn Strande | YES |
| Trestles | UCSD/SDSC | Richard Moore | ???? | YES |
| Quarry | Indiana Univ | Craig Stewart | Therese miller | YES |
| Forge/Ember/MSS | Univ of Illinois/NCSA | John Towns | Tim Cockerill | YES |
| Keeneland | Georgia Tech | Jeffrey Vetter | Dick Glassbrook | YES |
| Lonestar | Univ of Texas-Austin/TACC | Jay Boisseau | Chris Hempel | YES |

Voting Summary:

      YES votes:      _16_
      NO votes:      _0_
      ABSTAIN votes:   _0_

Based on this voting, this document has been accepted and approved as of March 1, 2012.