



Director, High-Performance Computing (ITS) Job Description

JOB INFORMATION

<i>Job Code:</i>	165881
<i>Job Title:</i>	Director, High-Performance Computing (ITS)
<i>FLSA Status:</i>	Exempt
<i>Supervisory:</i>	
<i>Job Family:</i>	IT Management
<i>Job Family Group:</i>	Information Technology
<i>Management Level:</i>	4 Administrator

JOB SUMMARY

Oversees the High-Performance Computing (HPC) infrastructure, supporting data-intensive and computational research across disciplines at the university. Leads the design, development and evaluation of cloud and big data systems to support research efforts. Develops a strategic vision and provides high-level direction for HPC, driving continuous improvements in business processes and managing the implications of security and compliance guidelines. Builds and maintains strong relationships with ITS leaders, customers and partners, and participates in governance boards and campus-wide technology initiatives to understand current and future business needs. Responsible for the development of team members, leading by example and fostering an inclusive environment that values differences and creates a sense of belonging and appreciation. Administers department budget, creating, planning, monitoring, reconciling, and directing resources.

JOB QUALIFICATIONS:

Education

<i>Req</i>	<i>Pref</i>	<i>Degree</i>	<i>Field of Study</i>	
X		Bachelor's degree	Data Analytics	Or
X		Bachelor's degree	Computer Science	Or
X		Bachelor's degree	Computer Engineering	Or
X		Bachelor's degree	in related field(s)	
	X	Master's degree	Data Analytics	Or
	X	Master's degree	Computer Science	Or
	X	Master's degree	Computer Engineering	Or
	X	Master's degree	in related field(s)	
	X	Doctorate		

Additional Education

Check here if experience may substitute for some of the above education.

Combined experience/education as substitute for minimum education

Work Experience

<i>Req</i>	<i>Pref</i>	<i>Work Experience</i>	<i>Experience Level</i>
X		8 years	
	X	10 years	

Additional Work Experience

Check here if education may substitute for some of the above work experience.

Combined experience/education as substitute for minimum work experience

Knowledge, Skills and Abilities

Req	Pref	Functional Skills
X		Proven ability to develop and manage a high-performing team.
X		Extensive experience with leading, complex cloud and big-data systems, specifically Linux HPC clusters and other cloud-based technologies, firewalls and encryptions, as well as DNS, DHCP and other routing-and-switching fundamentals.
X		Direct, hands-on experience with network transport, design, planning and implementation.
X		Experience with computational resources, data storage and management, and architecture and system administration.
X		Strong understanding of higher education institutions and staff, with demonstrated experience supporting large-scale network implementations and upgrades, and delivering reliable and quality network service within a higher education environment or large private-sector organization with federated operations.
X		Experience working with researchers and other stakeholders to translate business needs into technical strategies with corresponding technology roadmaps.
X		Exceptional written and oral communication and interpersonal skills, with extensive experience presenting ideas and solutions in non-technical, business-friendly terms.
X		Demonstrated experience serving productively and effectively as both a team leader and member, establishing positive working relationships and strong rapport with groups diverse in culture, discipline, and background, and developing high-performing teams.
X		Excellent organizational, planning and problem-solving skills.
X		Ability to prioritize and manage multiple projects while developing and managing audit processes and reporting results.
X		Strong customer service orientation.
	X	Proficiency in information technology and with high-performance computing platforms.
	X	Security+ certification.
	X	Substantial development experience with C++ and C.
	X	Experience with networking and storage concepts and architectures, including HPC storage and architecture.
	X	Demonstrated track record of driving emerging and/or disruptive technologies.
	X	Knowledge of functional programming (i.e. Haskell, SML, OCaml) and object-oriented and multi-paradigm system development (i.e. Scala).
	X	Ability to articulate complex concepts to cross-functional audiences.

Other Job Factors

JOB ACCOUNTABILITIES

	% Time	Essential	Marginal	N/A
Leads the design, development and evaluation of cloud and big-data systems to support research efforts, defining and refining policies and programs to meet customer technology needs. Identifies and develops opportunities for innovation in research computing by leveraging expertise, industry trends and leading practices, and a deep understanding of stakeholder needs.				
Develops HPC's strategic vision, including priorities, resourcing and ownership per activity, timelines, and dependencies in collaboration with campus business partners. Provides consulting services for faculty and researchers. Drives continuous improvements in business processes by establishing key metrics, and develops and manages reporting mechanisms to track and measure departmental demand, impact, and performance.				
Provides vision and high-level direction for HPC within the larger context of the ITS and USC environments. Manages the implications of security and compliance guidelines by embedding university policies and procedures into work plans and workflows. Works closely with customers to relay the importance of and sensitivity around risk identification, mitigation and remediation. Establishes				

JOB ACCOUNTABILITIES

	<i>% Time</i>	<i>Essential</i>	<i>Marginal</i>	<i>N/A</i>
governance for HPC through the implementation of standards, procedures, and quality measures. Responsible for the execution of HPC's service portfolio.				
Builds and maintains strong relationships with ITS leaders, customers and partners, ensuring consistent, reliable service is delivered to a broad range of university stakeholders. Develops and manages a holistic strategy for delivering quality and continuously improved service. Participates in governance boards, councils, meetings, and campus-wide technology initiatives to understand current and future business needs.				
Responsible for the development of team members, helping them set and achieve goals for career growth. Fosters an inclusive environment that values differences and creates a sense of belonging and appreciation. Leads by example, demonstrating strong ethics, high accountability, and actively driving the process of embedding ITS values and behaviors. Creates a culture of trust and transparency. Drives best-in-class customer service through effective team member engagement.				
Administers department budget, creating, planning, monitoring, reconciling, and directing resources. Works closely with ITS leadership to identify, implement, and support cost-effective, leading solutions for all aspects of HPC by maintaining currency with industry innovations and providing thought leadership around process optimization.				

Other Requirements

<i>Essential:</i>	<i>Emergency Response/Recovery</i>	<i>Essential:</i>	<i>Mandated Reporter</i>
	In the event of an emergency, the employee holding this position is required to "report to duty" in accordance with the university's Emergency Operations Plan and/or the employee's department's emergency response and/or recovery plans. Familiarity with those plans and regular training to implement those plans is required. During or immediately following an emergency, the employee will be notified to assist in the emergency response efforts, and mobilize other staff members if needed.		A mandated reporter who in his or her professional capacity has knowledge of, or reasonably suspects a person who is under the age of 18 years, elderly, or a dependent adult has been the victim of abuse or neglect must report the suspected incident. The reporter must contact a designated agency immediately or as soon as practically possible by telephone or in writing within 36 hours. By virtue of the associated job duties, this position qualifies as a mandated reporter as required by state law and USC's policy at: https://policy.usc.edu/mandated-reporters/
<i>Campus Security Authority (CSA)</i>			<i>Essential:</i>
By virtue of the associated job duties, this position qualifies as a Campus Security Authority as required by law and USC's policy at: https://dps.usc.edu/alerts/clery/			No

ACKNOWLEDGMENTS

The above statements reflect the essential and non-essential functions as necessary to describe the principle contents of the job. They are not intended to be a complete statement of all work requirements or duties that may be required of the position. I understand that I may be asked to perform other duties as assigned. USC reserves the right to add or change duties at any time.

The University of Southern California is an Equal Opportunity Employer. USC prohibits discrimination on any basis protected under federal, state, or local law, regulation, or ordinance or university policies. All employment decisions are based on individual qualifications and business need.

I acknowledge receipt of this job description and its associated physical requirements. I have read and understand the job description and job requirements and agree to abide by their contents. I realize that duties may be requested of me that are not specifically stated herein. I understand that I will be expected to adjust to potential fluctuations in work volume. I understand that, if I have any questions about the essential functions or expectations of my position, my supervisor and/or HR partner are available to discuss them with me.

Print Employee Name

Signature

Date

Print Manager Name

Signature

Date

This job description describes the general nature and level of work required by the position. It is not intended to be an all-inclusive list of qualifications, skills, duties, responsibilities or working conditions of the job. The job description is subject to change with or without notice, and Management reserves the right to add, modify or remove any qualification or duty. Nothing in this job description changes the existing at-will employment relationship between the university and the employee occupying the position.