



ELI Delivery Consortium AISBL

Senior IT Systems Engineer

Background information and position description

Extreme Light Infrastructure

The [Extreme Light Infrastructure](#) (ELI) is the world's most advanced international laser research infrastructure. It provides the scientific community with access to a new generation of laser technologies delivering sources of ultra-intense high-energy particle beams and ultra-bright radiation in the shortest timescales for multidisciplinary applications in a wide range of disciplines including materials sciences, engineering, medicine, biology, chemistry, and astrophysics. ELI consists of three complementary facilities located in the Czech Republic, Hungary and Romania.

The ELI facilities will be operated as an integrated organization, the ELI European Research Infrastructure Consortium (ELI ERIC), which is in the process of being established and will operate beginning in 2021. It will initially include the facilities located in the Czech Republic and Hungary and will have its registered office in the Czech Republic. The Extreme Light Infrastructure Delivery Consortium (ELI-DC) is an international association coordinating the establishment of ELI ERIC and the transition of ELI to operations.

IMPULSE Project

The IMPULSE Project is a €20-million project financed by the European Commission under the Horizon 2020 Research and Innovation Programme (Grant Agreement number 871161) involving 15 research organisations from 10 countries.

The project is designed to support the swift and effective transition of ELI to sustainable operations under the single governance and management of ELI ERIC. Over the 42-month duration of the project, IMPULSE will address the key scientific, technical, organizational and management requirements of this transition, building user communities, and expanding the ELI member consortium.

The main outcome expected out of the project is to make ELI ERIC an efficient integrated organization, with world-class, cost-effective operations and excellent user-access enabling breakthrough science.

Position Overview

Within the framework of the IMPULSE project, we are seeking candidates for a position of **Senior IT Systems Engineer**.

The selected candidate will support the transition of ELI from separate project entities to a single integrated international organisation by being responsible for the design of high and low-level IT infrastructure for a line of business systems and interconnect multiple locations respecting the IT Industry standards (service availability of the services, IT security standards). He/she will support the definition of hybrid Hosting Policies, Standards and Patterns that can be used and shared across the organisation and ensure that all Infrastructure decision-making is strategically aligned and optimized for a total cost of ownership.

The candidate will play a key role in redesigning, updating and/or upgrading the existing IT Architectures. In this process, he/she will be work in close collaboration IT teams already in place at the ELI Facilities. Together with the on-site system engineers, he/she shall form the core of the future organisation's Enterprise IT. Together they will provide clear SLAs and KPIs for the services provided by the Enterprise IT and will collaborate closely with the Scientific Computing and Data Management groups to define the KPIs of the entire IT Infrastructure.

The Senior IT Systems Engineer will also function as a Product Manager for infrastructure-related products. He/she will be responsible for developing the strategy, roadmaps and investment plans for all hosting- and infrastructure-related IT. He/she will work in close relations with the Computing and Data Management stakeholders to actively engage in solving some of the challenges they face in their development process (e.g the storage architectures and Data Management Systems for the ELI facilities are expected to generate and manage 10s of PB of data in steady-state operations)

Reporting and Interactions

The Senior IT Systems Engineer will work under the direct supervision of and report to the Senior Coordinator for Data Management and Computing. He/she will be involved within the IT-related activities of the IMPULSE Project and interact within this context with the project stakeholders, in particular the General and Scientific IT teams of the ELI Facilities.

Duties and Responsibilities

The Senior IT Systems Engineer will have the following duties:

- Be responsible for designing the General IT Infrastructure for ELI ERIC. He/She shall coordinate with the existing on-site General IT teams to develop a common IT Strategy for all ELI sites and all the associated IT processes and policies
- Develop a sustainable IT Computing Ecosystem for users (internal or external) and stakeholders in close collaboration with the Scientific Computing Divisions and IT Security

- Create, manage and maintain the Infrastructure roadmaps for Hybrid Hosting Cloud Hosting, Data Centres, Storage, Virtualisation, Compute, Operating Systems & Databases, Networks, and Hosting Management Tools
- Be responsible for identifying required investment for General IT infrastructure technologies or services
- Be responsible for organizing the IT Operations, define the necessary processes and procedures, collaborate with the software engineering team to design and deploy the Network/Services monitoring tools of the IT Infrastructure
- Sponsorship Infrastructure related investment projects in T&D
- Support the development of T&D business cases that require infrastructure-related decisions
- Be responsible for Hybrid Hosting Strategy, Policy, Standards and Patterns
- Provide governance of the General IT Infrastructure technology-related architecture to the company, as well as supporting IT Security tasks for the designed architectures
- Assurance of 3rd party Infrastructure technology architecture
- Provide technical consultancy on new initiatives including scoping/clarifying requirements and solution proposals

Required skills

- Strong infrastructure architecture skills in architecting technology components across software, infrastructure, and networks
- Solid Networking and security skills and knowledge, including Data Centre, including interconnecting technologies like InfiniBand/iSCSI/FCoE etc. (including routing protocols BGP, IS-IS, OSPF, VXLAN and L2 network and security) architecture design and build is mandatory
- Ability to take a loose set of requirements and build high-level architecture proposals
- Excellent ability to analyse complex components, identify decision points, draw conclusions, and produce architecture artefacts
- Highly self-motivated and directed, with keen attention to detail
- Analytical and problem-solving abilities
- Ability to communicate at all levels with strong stakeholder management experience; ability to influence and persuade others
- Ability to effectively prioritise tasks in a high-pressure environment
- Delivery-focused and organized with the ability to drive tasks forward and meet demanding deadlines
- Ability to organize, evaluate and implement the normal IT Operations tasks and procedures to provide a high SLA.(tasks/procedure are a must for IT Operations Team).

Knowledge

- Detailed knowledge of Windows and/or Linux infrastructure Focusing on IT Enterprise Infrastructure. (our facilities will be using diverse environments that will require to integrate services operating under different Operating Systems)
- Detailed knowledge of network designs including security standards and best practices.

- Detailed knowledge of virtualisation technologies(VMware/Hyper-V/Proxmox)
- Detailed knowledge of Microsoft AD and SCCM
- Detailed knowledge of backup/restore concepts (Veeam/Acronis/Avamar or other similar 3rd party solutions)
- Knowledgeable on public cloud technologies and trends specifically Azure, AWS or Google Cloud (experience in using at least one of the above solutions would be a plus)
- Detailed knowledge of Microsoft End User computing portfolio of products, centralized software deployment, and management
- Networking and Security advanced knowledge (Industry Certification Professional level)
- Knowledge of Unified Communications technologies
- Broad knowledge and understanding of planning and project management tools and techniques

Experience

- Detailed understanding and experience in working with Integrated IT systems, including experience in design/implementation/operations of IT solutions covering:
 - Microsoft Windows Architecture/ Linux Architecture
 - Network Solutions and Architectures for Campus and Data Centre (including VXLAN/virtualization using Cisco, Juniper or similar vendors)
 - Virtualization Solutions
 - Cloud Solutions
 - Scalable Solutions
 - Including Core Routing (BGP), together with the Distribution and Access Layer switches
 - Design and deploy firewall solutions, including the IT operations hand-over process, including the procedures and IT Operations handbook.
- Experience in designing business application infrastructure. With an understanding of the non-functional requirements such as reliability, scalability, performance, and resilience
- Proven experience in designing infrastructure within an overall agile development process
- Experience in communicating a technical issue to team members.

Employment conditions

- Start of employment as soon as possible.
- Term: full-time employment with an initial duration of 3.5 years, extension beyond that initial term possible.
- Location: ELI Beamlines (Dolní Břežany, Czech Republic) or ELI-ALPS (Szeged, Hungary).
- Salary: base salary competitive, commensurate with experience of the selected candidate, additional remuneration elements to support relocation negotiable.
- Frequent short-term travels between the ELI Facilities and partners involved in IMPULSE are a key requirement of the position, including driving.

Candidates should send a letter of interest, including a concise description of experience and any other element relevant to the position, as well as their CV to jobs@eli-laser.eu **no later than 12 April 2021**.

For informal enquiries about any aspect of the post, please contact Teodor Ivănoaica, Senior Coordinator for Data Management and Computing (teodor.ivanoaica@eli-laser.eu). All enquiries/information from the candidates will be handled confidentially.

Selected candidates will be invited to take part in interviews in the second half of April 2021.