

# APEX IT / Electronics Engineer - System Manager

The Atacama Pathfinder Experiment (APEX) Observatory and the Millimeter and Submillimeter Astronomy Department of the Max-Planck-Institut für Radioastronomie (MPIfR) in Bonn, Germany, in collaboration with the Pontificia Universidad Católica de Chile (PUC) in Santiago, are seeking a highly motivated IT / Electronics Engineer to join our team as a **Hands-on APEX IT/System Manager**.

## About APEX:

The Atacama Pathfinder EXperiment (APEX) 12m (sub)mm telescope on the Chajnantor Plateau in the Chilean Andes has been conducting ground-breaking observations and exciting research on the cold Universe for more than 18 years. It plays an important role not only as a pathfinder, but also as a complementary instrument for ALMA and the Event Horizon Telescope (EHT). Large programs such as ATLASGAL, SEDIGISM, and LESS have been ground-breaking for research on the dense galactic interstellar medium and the early Universe, respectively.

## The Position:

As an APEX IT/System Manager, you will play an essential role in supporting observations by maintaining equipment and the IT infrastructure at our world-class facilities. Your responsibilities will include, but will not be limited to:

- Monitoring and maintaining the APEX Linux server machines holding different types of services, as well as virtual machines.
- Installing and configuring Linux server machines, as well as software and libraries of varied areas in them.
- Managing the internal and external IT services (Jira Tickets system, web service, mail service, DNS and DHCP services, Grafana services, etc.).
- Monitoring and maintaining the database engines and the databases in them, as well as the backup systems for scientific and non-scientific data.
- Support the Science Operations group by maintaining and installing software programs and libraries, as required by the group.
- Development of software (programs and scripts) for different purposes, such as: monitoring of real world and virtual variables, control of real world and virtual systems, backup of scientific data, and in general, data processing of different kinds.
- Managing, maintaining and updating the network infrastructure, which contains switches, routers, firewall services, VPN services, wireless point to point communication equipment, etc.
- Managing and maintaining our VOIP system.

## Location and Working Conditions:

- The position is based at the APEX Observatory near San Pedro de Atacama, Chile, with occasional travel to the telescope at 5,100 meters above sea level.
- The position involves 40 working weeks in regular 8-day shifts at APEX, followed by 6 days off-shift, to support the operation and observations.
- Office space is also provided at the Astro-Engineering Center (AIUC) PUC in Santiago, Chile.

## Required Qualifications:

- Engineering degree in IT / System Management, Computer Science, Electrical or Electronics Engineering.
- Knowledge in at least 5 of the following areas:
  - Linux OS at administrator level.
  - Computer and network services: email, HTTP, Wiki/Documentation, DNS, DHCP, NFS protocols and others.
  - Network management, including switches, routers and firewalls (for instance with HP or Cisco equipment).
  - Hardware maintenance for server hosts and PCs (e.g.: replacement of power supplies, hard drives, RAM, CPU, expansion cards, etc.).
  - Installation and setup of whole machines.
  - Storage RAID systems management.

- Bash and Python scripting languages. C and C++ programming languages.
- Database management and maintenance using SQL.
- At least one year of professional experience in similar areas.
- Excellent communication and collaboration skills.
- Excellent English language fluency (written and oral).
- Ability to work effectively in an international, multicultural, and multidisciplinary team.
- Class B driver's license.

#### Desirable Qualifications:

- Knowledge/experience with SCADA and HMI systems (for the visualization and analysis of monitored data, as well as for the control of output variables).
- Experience with ticketing systems and data backup systems.

#### Compensation and Benefits:

- The initial appointment is for three years with the possibility of extension.
- Salary is paid in Chilean Pesos with a monthly gross range between \$1,800,000 and \$3,000,000 depending on qualifications.

Interested candidates should send application materials including curriculum vitae, a two-page summary of relevant experience, projects and plans, and the names of three professional referees who have been asked by the applicant to be willing to submit letters of recommendation by email to Prof. Dr. Bernd Klein: [bklein@mpifr-bonn.mpg.de](mailto:bklein@mpifr-bonn.mpg.de) and Dr. Juan-Pablo Pérez-Beaupuits: [jperezbe@eso.org](mailto:jperezbe@eso.org)

Initial review of applicants will begin on **December 15, 2024, but applications will be accepted until the position is filled**. Applications will also be considered for other positions to be opened soon at the APEX observatory and pre-selected candidates will be contacted directly.

Due to travel requirements and work at high altitudes, a successful high-altitude medical check is a necessary condition of employment for this position.

#### EEO/AAP Policy Statement:

APEX and PUC are an equal opportunity employers committed to fostering an environment that welcomes and embraces diversity, and does not discriminate on the basis of race, color, creed, religion, origin, disability, age, sexual orientation, or marital status in its activities, including employment, admissions, and educational programs.

For more information:

- APEX website: <https://www.apex-telescope.org/>
- PUC Faculty of Engineering and Sciences: <https://www.ing.uc.cl/en/academicos-e-investigacion/>
- MPIfR Millimeter and Submillimeter Astronomy Department: <https://www.mpifr-bonn.mpg.de/research/submm>

Other Chilean and University employment benefits may be found in:

- Foreign workers in Chile: <https://www.dt.gob.cl/portal/1626/w3-article-93693.html>
- University rules and regulations: <https://direcciondedesarrolloacademico.uc.cl/politicas-y-reglamentos>
- All members of the Pontificia Universidad Católica de Chile subscribe the Code of Ethics that can be found in <https://www.uc.cl/codigo-de-honor/>