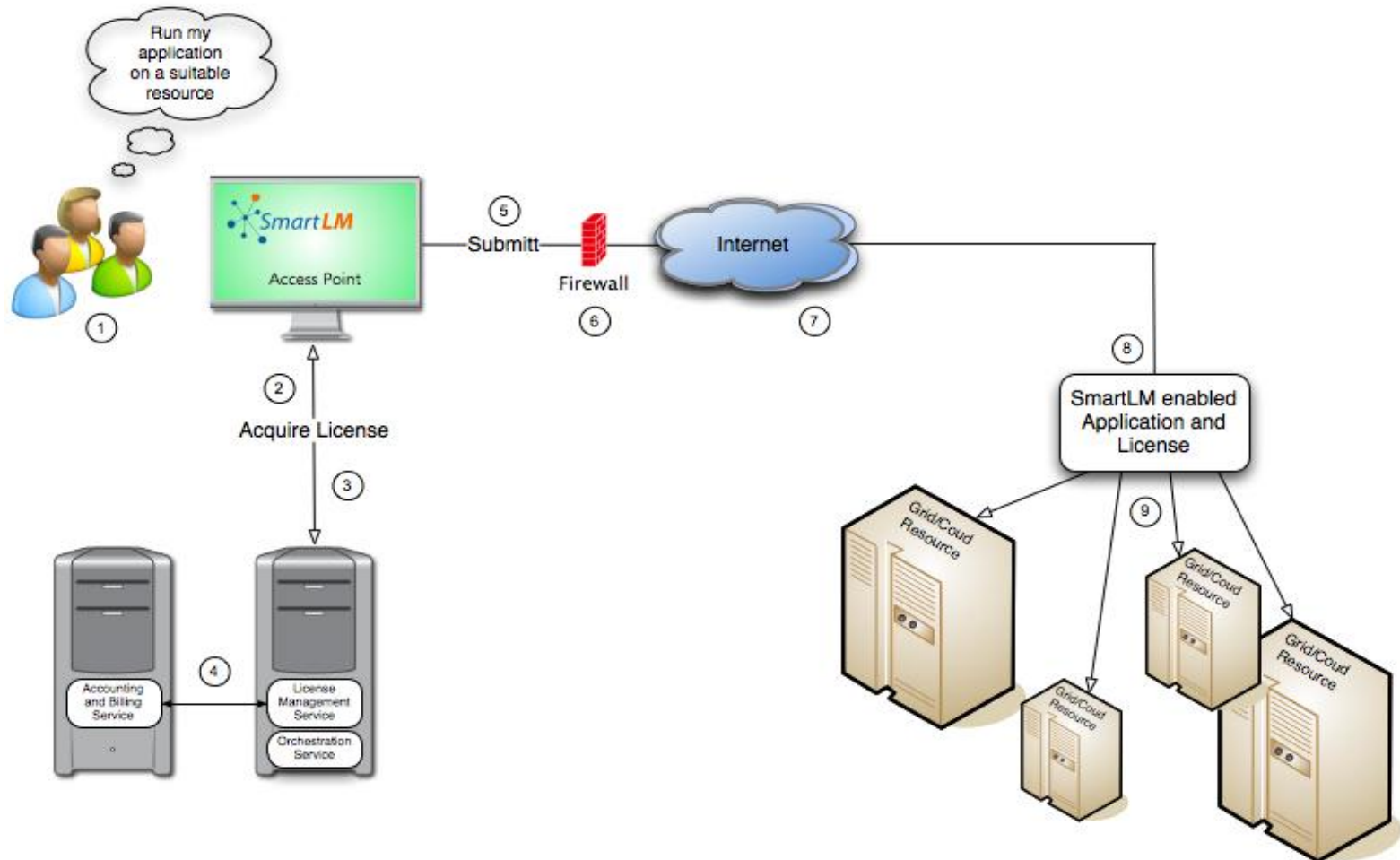


# Running License Protected Application with SmartLM & Unicore

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- **SmartLM Overview**
- **License Management Service**
- **Orchestration Service**
- **WSAG4Unicore6 Service**
- **Orchestrator Client**
- **Demonstration**



# License Management Service

- Administration and scheduling of licenses
- License token generation and signing
- License token is created from ISV license file and based on user authorization
- WS-Agreement/WS-Agreement-Negotiation based negotiation for license features, price and execution host
- The generated token comprises the needed features with specific settings, activation and expiry time

# Need of Orchestrator

- License token is issued for a specific time period
- User transfer the token to a computing resource where job is going to execute
- Need to ensure the availability of computing resource for a same time period

# Orchestration Service

- **Co allocates license and computing resources both in time and space**
- **Negotiate and reserve computational resources and the licenses**
- **sends the token received from license service together with the user's job to the reserved computational resource**

# WSAG4Unicore6 Service

- **WS-Agreement based integration service for Unicore6 environment**
- **Provides templates for data staging, job submission and execution management**
- **Reservation of computational resources**

# Orchestrator Client

- **Extensions in UNICORE rich client**
- **Steering license and computing resources negotiation**
- **Application Grid Beans for Job submission**



# Demonstration

- **SmartLM Testbed**
- **ANSYS CFX Application**
- **Reservation negotiation**
- **Token generation and application execution**