



LICENSE MANAGER FOR ZERO CLIENT DESKTOP COMPUTING CUSTOMER

CLIENT OVERVIEW

Our client, a leader in Zero Client Desktop Computing is committed to helping their customers overcome the growing costs and complexities of desktop computing. Our client's vision is to radically centralize all desktop management and processing into the data center where human resources, capital investments and operating expenses can be optimized, shared and leveraged. Their innovative desktop virtualization hardware and software solution redefines the delivery and management of end-user computing by radically centralizing desktop management.

KEY REQUIREMENTS

- Development of New web service for validation of license policy
- Ensure implementation of appropriate access control policy for each customer Licensed entitlements should fall into two classes:
 - Device enabling entitlement
 - Upgrade entitlement
- A rules' engine to be embedded within License service which would be responsible for enforcing different license policies. Based on capability and constraint entries in the license file different rules will be put into effect
- The license management schema should be flexible to support new capabilities in future, and also needs to support extended trials where customers would use the products for an extended period of time before purchasing
- Implementation of Notification services for administrators and end users for notifying any change in license compliance status.
- Internationalization of the License Manager UI and the messages displayed and emailed to the administrators and end users.
- Real time license compliance check for system upgrades to ensure customer could only apply patches and upgrades that they are entitled to use.

KEY CONTRIBUTIONS

- Contributed in the development of the Inventory Service module to keep track of device usage history data for customer's installation on daily basis. This was developed as a SOAP web service.
- Developed license adapter for the client and their OEM partner. Any access to license management system happens through these adapters, to ensure the partner specific behavior could be achieved.
- Developed the license service to keep a check on the user's entitlements for different capabilities and to enforce the same. This service monitors the inventory usage at regular interval, so that any violation of license could be detected.
- Developed a mechanism in which the license key was generated on the first use of the product evaluation and user is allowed to use the product for evaluation period with restrictive capability.
- Configured the user's email notifications by which the License Manager shall also send emails to the configured administrator's email about license state changes.

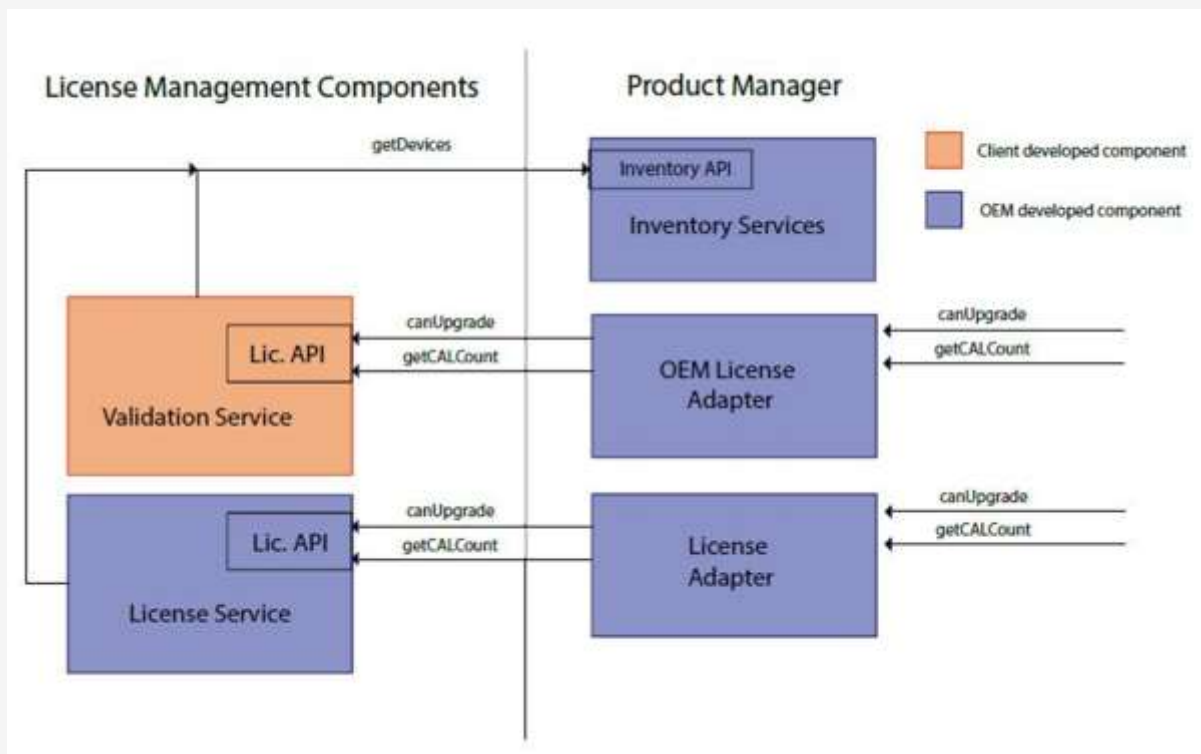
KEY BENEFITS

- Aggressive product release dates were achieved through ownership based engagement by Xoriant team that complemented client's technical excellence. Attained time to market goals and cost advantage due to offshore model of project execution.
- Helped in increasing revenues for client by having better control on license compliance by the implementation of capability based licensing.
- Extendable license schema and generic rule engine, made it possible to extend the license enforcement for any new capabilities that are added to the product in future.

- Designed the license schema such that it takes care of defining user entitlements for the current capabilities and can be extended if required to support more capabilities in future. Developed a license key generation utility to generate license keys for users with defined set of capabilities
- Used a security certificate to generate a unique signature, so that the license key could not be tampered manually
- Provided a mechanism for all the system upgrades checking for compliance in real-time, to check if user is entitled for the patches or upgrade, before the upgrades are actually applied.

- Mechanism for generating a signature for the license key using security certificate made the license key tamperproof.
- SOAP web service to get inventory and usage data could be used to generate various usage reports and allows better planning and management of the resources.
- The design allowed different license enforcement for different OEM partners by use of adapters.

HIGH LEVEL ARCHITECTURE



TECHNOLOGY STACK

- Java/J2EE
- Google Web Toolkit
- Apache Axis
- Apache Tomcat
- PostgreSQL
- Apache Derby DB
- Apache ANT
- Tortoise SVN
- Eclipse IDE
- OS: CentOS Linux, Windows



About Xoriant:

Xoriant Corporation is a Product Development, Engineering and Consulting Services Company, serving technology startups as well as mid-size to large corporations. We offer a flexible blend of onsite, offsite and offshore services from our eight global delivery centers with over 2000 software professionals. Xoriant has deep client relationships spanning over 25 years with various clients ranging from startups to Fortune 100 companies.