

NOVAtime 4000

*The Complete
Time and Attendance / Workforce Management
Solution at Anytime, Anywhere*

**NOVAtimeAnywhere®
Software as a Service (SaaS)**



Solution Framework

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Abstract

In this current economic climate, every advantage counts. Keeping track of labor and processing payroll could be time-consuming, error-prone, and expensive.

Using a hosted solution can increase your company's competitive edge, without expensive upfront software / license fee, server purchase, and costly one-time and ongoing IT infrastructure / resources.

NOVAtime 4000 Service delivers solid performance, scalability, and reliability. Best of all, it grows with your company. It is the most powerful solution in Time and Attendance / Workforce Management online, as a subscription service. A company of any size now has a secure, cost-effective, maintenance free, and turnkey solution for managing employee time.

NOVAtime 4000 can be accessed from the Internet through secure browser connections. In order to provide a world-class service, we have designed procedures based on best-practices, adhered to proven industry standards, and deployed state-of-the-art technologies. Our team is very dedicated, knowledgeable, and customer-focused. We are very proactive in the day to day operations related to NOVAtime 4000.

This white paper discusses the framework on which NOVAtime 4000 Service is built on: from the technology innovation aspects, to the unique flexibility of our service offering. The NOVAtime 4000 Service is built with the following goals:

Maximum Security, High Availability, and True Scalability

Complete Flexibility with NOVAtime Product Line

All are important factors to understand why choosing NOVAtime 4000 is a superb decision.

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1. Maximum Security

One of our hosting service's fundamental design considerations is security. We use a multi-layered, defense-in-depth approach to provide maximum protection and integrity at all components of our solution.

Facility

Our service is homed in facilities with highly controlled keycard access, 24x7 video surveillance and recording, and 24x7 security personnel. The data center is SAS 70 Type II certified.

Transport

We require connections from the Internet to use 128-bit SSL protocol (https://). In addition to providing authenticity of our site, SSL also ensures privacy, and data integrity through encryption.

Firewalls and intrusion prevention systems are deployed to prevent unauthorized access. The only data that can enter is SSL traffic, and only to the Web servers.

We have separate logical networks (VLANs) for Production, Backup, and Management purposes. We use Access Control Lists (ACLs) to precisely permit only the needed traffic between each VLAN.

System

All the systems in our hosting solution have hardened OS, with security patches kept up-to-date. Our servers are running with a straight security policy, fine-tuned to fit their particular roles.

Remote access to the systems is via secured IPSec VPN tunnel only.

Application

A unique device string is configured for each time-clock to authenticate with our service before data communications can be established.

To login to our service, in addition to requiring unique user name and strong password, we also have an extra level of protection with our Randomized Image Authentication technology.

To help mitigate the threat of unattended sessions, NOVAtime 4000 uses inactivity time-outs. Users are automatically logged out of our service when their SSL session remains inactive for thirty minutes.

Database

We took extra measures to ensure that data is only accessible by the authorized users. Each customer has a separate database; Each database requires a unique authentication, determined by the customer identity, from the Application service.

2. High Availability

To achieve high availability, every component used in NOVAtime 4000 is extremely reliable and optimally configured for performance.

Sophisticated systems are in place to guarantee the core facilities components are available 100% of the time. There will not be any downtime due to power or heat problems.

Through connections to multiple tier1 backbone providers and Border Gateway Protocol (BGP) technology, we achieve 100% uptime for Internet connectivity.

We use high-end servers and high throughput network devices to deliver fast performance. All of them are dedicated solely for NOVAtime 4000. Hardware redundancy is also provided within our solution for every important subsystem.

Our software is architected to work flexibly on a 3-tier model. It is designed with intelligence to keep all user session info intact even when changing servers in another tier. This innovation allows NOVAtime 4000 to run in a load balanced configuration in any tier. We have a cluster of servers in each appropriate tier, and with hardware load balancer, we achieved high performance in every tier of our service – from delivering web pages to generating reports.

In addition to enhancing performance, our load balancing solution also provides failure protection. When a cluster suffers a server failure, the load is seamlessly redistributed to the remaining servers in the cluster.

Processing SSL encryption and decryption is CPU-intensive. We offload these processing from our Web servers to a hardware SSL accelerator for optimizing performance.

We use a multilevel backup strategy. The primary backup goes from disk-to-disk within our hosting infrastructure, followed by a secondary backup to disk to an off-site location, and eventually to tape for archival purposes. The disk-oriented backup ensures fast restore, while the multi-site copies allow us to minimize downtime if regional disaster occurred.

3. True Scalability

Every component used in delivering NOVAtime 4000 is specified to handle many times more than our expected initial load, based on the proven efficient footprint of its predecessor, the NOVAtime 3000 Enterprise package. Still, we have all the necessary pieces in our hosting solution to allow us to maintain the same high performance level even when demands are increasing quickly.

On the application side, NOVAtime 4000 is designed on a multitenant architecture, this means customers share infrastructure and code base. We do not require separate stacks of hardware and software for each customer. This makes it possible for NOVAtime to have low maintenance and upgrade burden and achieve fast new customer deployment. On the other hand, our application's modularity allows individual customers to select only the set of features that they need.

On the physical infrastructure side, our network provisioning allows us to burst all the way to LAN speed to accommodate increase in network traffic. Our multi-tier software architecture and cluster design allows us to add server capacity on-demand, at the precise tier, without interrupting our service.

We analyze our monitoring data to trend utilization, from network bandwidth to system resources. Our practice is to add capacity well before it is needed. As a general rule, when our resources reaches a nominal load of 50% capacity or when there are frequent spikes above 70% of capacity, we will start getting ready to add more resources.

We have excellent relationships with our service providers and vendors which allow us to obtain the necessary resources promptly to support our growth.

4. Complete Flexibility

One unique offering in NOVAtime is our complete line of time and attendance / workforce management solutions:

1. NOVAtime 1000 Small Business Edition (SBE): Great starter for companies with up to 100 employees, and totally network ready (multi-users within your LAN).
2. NOVAtime 2000: A full featured package tailored to meet the needs of mid-sized companies.
3. NOVAtime 3000 Enterprise Edition: A web-enabled enterprise solution that efficiently handles tens of thousands of employees.
4. NOVAtime 4000 Software as a Service: A fully web-based, on-demand subscription service that is suitable for company of any size.

With our complete line of products, we are in a unique position to offer products that grow with your company as your company's needs and requirements change.

The choice is yours:

- ✚ **NOVAtime Service (Upgrade Strategy):** You can switch from being a NOVAtime 1000 / 2000 / 3000 customer to NOVAtime 4000 Software as a Service, or
- ✚ **Self hosted (Exit Strategy):** You can switch from NOVAtime 4000 Service to NOVAtime 3000 and manage the application yourself with your own IT staff and infrastructure.

Upgrade Strategy that Grows with You

One of the best reasons for choosing NOVAtime is your ability to upgrade from NOVAtime 1000, to NOVAtime 2000 and NOVAtime 3000. With the addition of the NOVAtime 4000 Service, you can now subscribe to the NOVAtime 4000 from any of the existing products.

Exit Strategy that Protects You

For majority of the hosted time and attendance / workforce management solution, once you stop the subscription service, you lose access to your data electronically. There goes the electronic version of your audit trail, and there goes meeting your audit requirement of keeping employee timecard data for years that all employers must meet (it varies by state).

With the number of wage and hour disputes on the rise, the importance of maintaining accurate employee work records is more important than ever before. However, with many companies managing their time and attendance via a hosted service, once the service is terminated, producing the necessary records and vital employee information when it matters most becomes quite challenging. As a result, companies are often unable to properly protect and defend themselves from labor litigation.

With our complete line of products, we are able to offer one of a kind "Exit Strategy" in the time and attendance / workforce management industry –

we do not hold your data as hostage to continue the hosted service. Keeping accurate and accessible employee attendance records are extremely important in protecting your company. You have an option as your company's needs and requirements change and want to host the system yourself.

You can move from NOVAtime 4000 to NOVAtime 3000!!! *You have a choice, and best of all, you get to keep your employee data and all the historical employee attendance history that you need to protect and defend your company.*

In short, subscribers to NOVAtime 4000 do not have to invest anything in infrastructure, do not have to worry about deployment and installation within their company, and do not have to allocate any resource for maintenance and upgrade. NOVAtime takes care of all these, the subscriber simply enjoy a solid, enterprise Time and Attendance / Workforce Management service, offered at Small and Medium Business (SMB) price points.

For more information, please contact us at sales@novatime.net or call 877-486-6682 for an authorized reseller and we will show you how to successfully manage Time and Attendance of your Workforce.