



FireServiceRota

www.fireservicerota.com



A Buyer's Guide to Availability Software for Firefighters:

*Evaluating Software for Retained and
Wholetime Stations*

About this guide:

This guide will help you:

- Identify the features you should be looking for when selecting software for availability planning for wholetime and retained fire stations.
- Understand how integrating wholetime and retained firefighters under the same software can add flexibility and resilience to the Fire and Rescue Service.
- Evaluate FireServiceRota as a potential provider of availability planning and scheduling software.



Cor Klaasse Bos
Co-founder

FireServiceRota is excited to publish this Buyer's Guide for availability, payroll and rostering software. For over a decade, we have specialised in software designed to give firefighters flexibility and a better work-life balance while ensuring appliance availability and peace of mind to managers at Fire Stations.

Through a recent tender process organised by Lancashire Fire and Rescue, FireServiceRota was awarded as one of 3 suppliers to the Framework Agreement that allows any UK Fire & Rescue Service to award call-off contracts for electronic availability, payroll and rostering systems.



Ruben Stranders
Co-founder

After reading this guide, you will be able to identify the most important decision criteria when choosing software dedicated to optimise crew management in both retained and wholetime stations. In addition, you will also see why FireServiceRota was considered the best value provider in the aforementioned tender and what our customers have said about their experience working with us.

*Cor Klaasse Bos & Ruben Stranders
Co-founders*

Table of Contents

What is the purpose of Availability Software?	4
Decision Criteria for the Retained Duty System	5
Decision Criteria for the Wholetime Duty System	7
Achieving operational efficiency: Wholetime and Retained Stations working together	9
Considering IT infrastructure	10
Why does FireServiceRota offer the best value?	12
Conclusion	14
Afterword	14

What is the purpose of Availability Software?

Fire and Rescue Services across the UK have been dealing with limited financial and human resources that demand innovative solutions to provide the highest level of service to the public. Among the challenges that Fire and Rescue Services have to deal with, is the challenge of optimising the use of staff and appliances.

Times have changed and the lifestyle and responsibilities of firefighters are no exception. More people are commuting, work schedules are more flexible and, in general, balancing work and life commitments has become harder. This means that the availability of staff has become less predictable and harder to control for fire authorities.

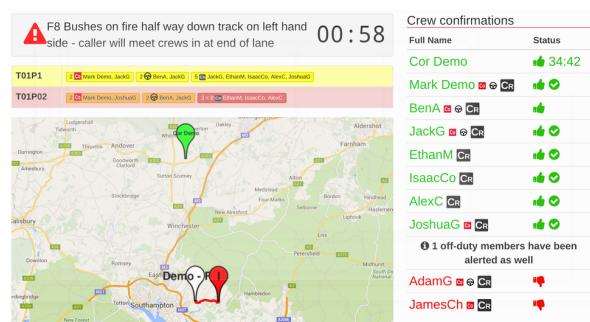
According to Sir Ken Knight's report *Facing The Future: Findings from the review of efficiencies and operations in fire and rescue authorities in England*, budget constraints and the aforementioned challenges have led individual Fire and Rescue authorities to innovate their current crewing and staffing models.

Both wholetime and retained fire stations look for more effective crewing models that ensure appliances are kept available while providing more flexibility to firefighters and optimise financial performance.

In the end, it all comes down to finding an efficient way of having the right people, at the right place, at the right time. This is where Availability Software comes in.

Availability Software allows fire authorities to effectively and flexibly manage resources to ensure the readiness and resilience of stations and provides electronic tools to firefighters to manage their own availability.

Availability Software is vital for ensuring the readiness of Retained and Wholetime stations as it allows to store, manage and report all the information generated by the users and use it to make smarter, more informed decisions.



Availability Software is an effective tool to ensure flexibility and efficiency.

Decision criteria for the Retained Duty System

What exactly makes for good availability software? There are several providers that offer this type of software, which makes it hard to identify which one provides the most value.

In what follows, we outline the essential features Availability Software for Retained Stations should have.

Crewing Levels Assurance

A system should allow managers to have insight into the availability status of their station. This means that availability software must:

- Allow the organisation to manage crewing requirements for all emergency vehicles.
- Set minimum crewing levels of staff numbers, roles and skills.
- Allow all retained personnel to manage their availability to a 15-minute granularity through different channels, such as web, mobile apps, smart pagers and SMS.



Availability software must be accessible through different devices.

- Warn the users when they are about to cause understaffing (take the pump of the run) by becoming unavailable.
 - BONUS: Automatically warn firefighters when they are on-call and move too far away from the station.
- Warn managers and other interested parties through email, push notification or SMS in case of (imminent) understaffing.
- Include a Regional Monitor detailing the live availability status of all retained emergency vehicles at all stations in one overview.
- Allow firefighters to confirm their attendance to incidents on smart pagers or mobile app. This means that firefighters who received the alert can confirm they are on their way to the fire station.



Geo-location features warn on-duty firefighters when they move too far away from the station.



A station display provides critical information during incidents.

- BONUS: At the fire station, display the estimated time of arrival and location of responding crew.
- Provide a crewing view that details the availability of all (available) personnel at a chosen location and appliance for any time in the future and past.
- Provide business intelligence about when crewing issues occurred, with detailed insight about which skills were deficient.

Employee Management

The ability to manage an employee's contracts and skills is essential to effectively manage a station.

Therefore, Availability Software should also:

- Track and display contractual targets of individual employees.
- Inform users about their fulfilment of contractual obligations.
- Synchronise staff availability information with the organisation's payroll system.
- Allow managers and supervisors to manage employee skills.

Internal Communication Tools

Efficient and powerful communication tools are key to improve the performance of stations, so software should also:

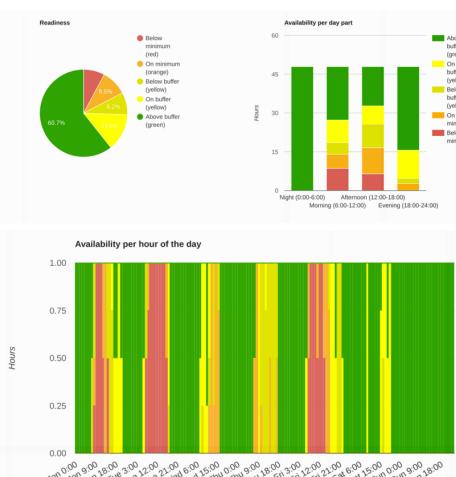
- Allow to broadcast priority messages to firefighters via web, email, push notifications and SMS messages.
- Let users exchange messages via mobile app to one or multiple people.
- Let managers and firefighters create and manage polls, surveys, and organisation-wide messages, with the ability to attach documents, images and links.



Station Performance Reporting

In order to be able to improve over time, fire authorities must have access to actionable data to make smarter, more informed decisions. That is why Availability Software must be able to:

- Analyse and report on availability and performance of firefighters and vehicles. This includes number of hours/shifts worked, and how often they were critical in keeping the appliance available.
- Help focus recruiting and training effort based on the moments the lack of a particular skill is frequently causing staffing issues.
- Show statistics about crew availability during different times of day and week.
- Log all schedule transactions and be able to audit them afterwards.
- Report on incidents, showing when and where the incident occurred, who was available, who responded, who attended in which role.
 - BONUS: allow commanders to update in real time who is attending the incident with them using the mobile app.
 - BONUS: track the location of the appliance en route to the incident, and capture response time statistics
 - BONUS: make it possible to dispatch based on skill or current location.
 - BONUS: use the system as a backup to an existing alerting and mobilisation system.
- Provide contractual compliance reports.



Performance reports are key to make faster, smarter decisions at any fire station.

Decision criteria for the Wholetime Duty System

Stations that work under the Wholetime Duty System have been faced with constant budget constraints for the past 10 years. As a result, fire authorities have been looking for solutions to optimise resources and make the Fire and Rescue Service more efficient. Below we outline some of essential features the software must have.

Roster optimisation

Earlier, we mentioned that availability software was meant to ensure that the right people are available at the right place and at the right time. Sometimes wholetime duty stations are crewed over optimal staffing levels to achieve resilience. However, this can create cost inefficiencies and put pressure on the work-life balance of firefighters.

Flexible rostering allows fire stations to optimise their crew distribution and prevent paying out overtime by rostering off people above optimal crewing levels or redeploy them during times of crewing shortages.

Implementing flexible rostering software can be of great benefit to Fire and Rescue Services if it provides the following features:

February 2017

Week	Shift	Mon	Tue	Wed	Thu	Fri	Sat	Sun
5	Day shift	30	31	01	02	03	04	05
	Night shift							Shift
6	Day shift	06	07	08	09	10	11	12
	Night shift	Shift	Shift	Shift				
7	Day shift	13	14	15	16	17	18	19
	Night shift	Shift	Shift	Shift	Shift			
8	Day shift	20	21	22	23	24	25	26
	Night shift		Shift	Crew	Shift	Shift		
9	Day shift	27	28				04	05
	Night shift							

Effective Rostering Software supports various types of duty systems, such as the 2-2-4.

- Manage each operational roster types, such as Flexible Crewing, Wholetime, Day Duty, etc. with its own associated rules.
- Support various types of duty systems, such as 2-2-4, three shift (Metropolitan) and 5 watch shift.
- Allow managers to specify minimum crewing requirements for each appliance at any given fire station.
- Alert users when they breach the crewing rules of the station.

- Move one or more shifts of crew members from one station to another and warn if the move causes crewing issues.
- Automate a request-and-approval workflow for shift exchanges between users.
- Automate a request-and-approval workflow for requesting personnel to work an extra shift.
- Audit all shift modifications.
- Allow for the capture of various special shift codes, such as leave, TOIL, sickness, resilience.

Request extra shift

Period	From	To				
Period	From: Tue 10 Jan '17 12 • 00 •	Until: Tue 10 Jan '17 18 • 00 • (6:00)				
Comments	Looking for extra cover..					
* Functions	Commander Driver Firefighter					
Candidates for duty	<input type="button" value="Find candidates"/> <input type="button" value="Select all"/> <input type="button" value="Select available"/> <input type="button" value="Clear selection"/>					
Full Name	Skills	Readiness	Member of	Comments	% performed	% allocated
✓ Harry	⊕ ⊕ ○	○	2-2-4 Demo Wholetime Station	100	91.0%	
Anthony Spencer	⊕ ○	○	2-2-4 Demo Wholetime Station	111	92.7%	
Ruben Demo	⊕ ⊕ ○	○	2-2-4 Demo Wholetime Station	111	91.6%	
John Hill	⊕ ⊕ ○	○	2-2-4 Demo Wholetime Station	111	91.6%	
✓ Finley Macdonald	⊕ ⊕ ○	○	2-2-4 Demo Wholetime Station	111	91.6%	
Mark Demo	○		Demo Station	111	92.7%	

Shift exchange requests should be automated and audited.

Robustness and flexibility

When evaluating different providers, it is important to consider how specific goals can be accomplished: from managing multiple operational staff roster types to sending information to the organisation's payroll solution. Look for software that can help with several aspects of personnel management. In more detail, software should:

- Allow users to manage and view their roster online, by mobile app and SMS.
- Hold employee personal details, such as address, pay reference number, rank, phone numbers and special comments.
- Have plannable and non-plannable profiles, the latter of which allows administrative members to gain access.
- Interface with the mobilising system used by the fire authority to communicate availability of resources.
- Manage all aspects related to leave, overtime, time off in lieu (TOIL) and public holidays according to the policy of the organisation, or that of individual stations.

Payroll integration

Cost efficiencies can only be registered and audited through a system that:

- Calculates the number of shifts worked, broken down into shift type and code.
- Manages leave based on the number of shifts or a period of time.
- Allows overtime to be claimed as a payment or as Time Off In Lieu (TOIL).
- Requires all overtime transactions to be authorised by users who have supervisor rights.
- Integrates with the organisation's existing payroll solution.

Name	Business rules
Sickness (✚) Sickness accruing as time worked	Person not available to be called in for an extra duty. Person not counted for active crewing. Shift count for 100.00% towards contractual target.
Non operational (No-Op) E.g. on modified duties, training, trade union leave	Person not available to be called in for an extra duty. Person not counted for active crewing. Shift count for 100.00% towards contractual target.
Resilience (✉)	Person available to be called in for an extra duty. Person not counted for active crewing. Shift count for 25.00% towards contractual target.

Software should consider all aspects of employee performance.

Reporting Tools

The ability to measure is the first step towards improvement, so the chosen system should provide a wide set of reporting tools that support decision making. The essential features that the system should have are:

- Report on all aspects of an employee's performance, including leave, sickness, overtime and shift adjustments.
- Track and audit contractual targets.
- Apply filters and selections to tailor individual reports.
- Export reports to PDF, Excel or CSV formats.

Period	Q1 2017	Time unit	Hours	Show																																																												
Statistics for Q1 2017 (Hours)																																																																
<table border="1"><thead><tr><th>Full Name</th><th>Target workload</th><th>Performed workload</th><th>Allocated workload</th><th>Overtime</th><th>% performed / allocated</th></tr></thead><tbody><tr><td>Anthony Spencer</td><td>524.0</td><td>94.62</td><td>548.0</td><td>24.0</td><td>18.1% / 86.5%</td></tr><tr><td>Cor Demo</td><td>524.0</td><td>94.62</td><td>548.0</td><td>24.0</td><td>18.1% / 86.5%</td></tr><tr><td>Declan Burke</td><td>524.0</td><td>90.0</td><td>536.0</td><td>12.0</td><td>17.2% / 85.1%</td></tr><tr><td>Dexter Nolan</td><td>524.0</td><td>90.0</td><td>536.0</td><td>12.0</td><td>17.2% / 85.1%</td></tr><tr><td>Emily</td><td>524.0</td><td>52.0</td><td>459.0</td><td>0.0</td><td>9.9% / 77.7%</td></tr><tr><td>Eric Goodman</td><td>524.0</td><td>96.0</td><td>528.0</td><td>4.0</td><td>18.3% / 82.4%</td></tr><tr><td>Firley Macdonald</td><td>524.0</td><td>90.0</td><td>536.0</td><td>12.0</td><td>17.2% / 85.1%</td></tr><tr><td>Harry</td><td>524.0</td><td>96.0</td><td>528.0</td><td>4.0</td><td>18.3% / 82.4%</td></tr><tr><td>Henry</td><td>524.0</td><td>90.0</td><td>536.0</td><td>12.0</td><td>17.2% / 85.1%</td></tr></tbody></table>					Full Name	Target workload	Performed workload	Allocated workload	Overtime	% performed / allocated	Anthony Spencer	524.0	94.62	548.0	24.0	18.1% / 86.5%	Cor Demo	524.0	94.62	548.0	24.0	18.1% / 86.5%	Declan Burke	524.0	90.0	536.0	12.0	17.2% / 85.1%	Dexter Nolan	524.0	90.0	536.0	12.0	17.2% / 85.1%	Emily	524.0	52.0	459.0	0.0	9.9% / 77.7%	Eric Goodman	524.0	96.0	528.0	4.0	18.3% / 82.4%	Firley Macdonald	524.0	90.0	536.0	12.0	17.2% / 85.1%	Harry	524.0	96.0	528.0	4.0	18.3% / 82.4%	Henry	524.0	90.0	536.0	12.0	17.2% / 85.1%
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Track and audit contractual targets.

Achieving operational efficiency: Wholetime and Retained stations working together

The next level in operational efficiency can be achieved through the cooperation and integration between Retained Duty System and Wholetime Duty System staff.

The ability to call in wholetime personnel for RDS stations that are temporarily under strength, and also allowing RDS personnel to cover resilience shifts for wholetime stations provides the ultimate flexibility and resilience for fire authorities.

A cutting edge planning and rostering system, such as FireServiceRota, allows the most suitable candidates to work an extra shift or exchange a shift by being notified at the touch of a button.



Spectrum of functionality of **FireServiceRota**

Once they accept, rotas are automatically updated. This automated request-and-approval workflow uses clear messaging and keeps track of all transactions. This reduces administrative work, speeds up the process, and offers more flexibility to on-duty crew.

FireServiceRota has the ability to manage retained and wholetime staff within the same system, meaning that the organisation can integrate different personnel to allow more personal flexibility and provide resilience when the organisation is under strength.

The system has the ability to import staff from the organisation's existing Retained Staff Availability management system and export staff from the Roster system to the existing Retained Staff Availability Management system.

Considering IT Infrastructure

Besides the scope of the functionality looked for in software, there are many technical considerations that should influence the decision making process. One thing to have in mind is to avoid getting generic one-size-fits-all software that pretend to 'do it all'. Instead, look for specialist solutions that integrate with other specialised solutions.

No software is built the same, so it's important to pay attention to specific details.

Accessibility and availability of the system

Look for service instead of servers. Most modern software is delivered via the cloud, meaning that it should be accessible through any device with an internet connection. This is called "Software-as-a-Service" (SaaS). SaaS removes the need to install and maintain dedicated servers or allocate costly resources from the IT department. Look for software that provides regular updates and technical support to ensure that servers are maintained, secured and backed up.

Reliable SaaS must be able to guarantee 99.9% uptime reliability and state-of-the-art software can expect 99.99% annual system uptime.



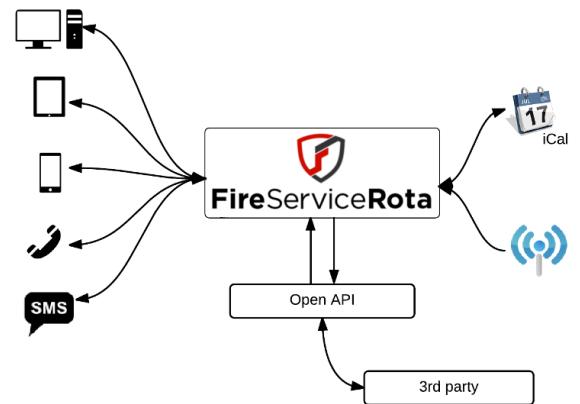
Software-as-a-Service makes the system accessible anytime, anywhere.

Integration with other systems

We recommend getting software that is able to interface with existing Command & Control, Payroll, HR, Incident Management, and other systems.

Look for software that has an XML/JSON API (Application Programming Interface) for retrieving reports, user data, rosters, etc. Make sure the provider can guarantee that data is protected and secured with the latest security standards.

Ideally, the software has an open API with detailed documentation which makes it possible to build new innovative applications and integrate with third-party systems against low cost.



Availability Software should have an open API to integrate with other systems at low cost.

Security

Since availability, payroll and rostering software holds sensitive information, it is imperative that the provider is protecting all data with the highest security standards.

Look for a system that complies with the Data Protection Act, uses up-to-date server software and encrypts all communication using TLS/SSL to keep the data safe against prying eyes.

The supplier should host and backup the system in servers within the European Economic Area in ISO 27001 certified Data Centres.

Security Overview



This page is secure (valid HTTPS).

- Valid Certificate

The connection to this site is using a valid, trusted server certificate.

[View certificate](#)

- Secure TLS connection

The connection to this site is using a strong protocol version and cipher suite.

- Secure Resources

All resources on this page are served securely.

Availability Software holds sensitive data, so it must comply with the highest security standards.

Version Updates

Getting availability software should not be a one time transaction without user guarantees and support.

Look for a system that provides regular, free-of-charge, automatic updates to the system to improve security, performance and enable new functionality.



Regular updates should be implemented with zero downtime.

Support

The best software provider should be able to fix issues before the customer is confronted with them. A provider should have real-time error capturing and use automated tests to ensure that the system performs correctly.

In addition, users should be able to contact system administrators regarding possible errors and faults. The provider should commit to fix any critical problem within hours, regardless of time and day.

Why does FireServiceRota offer the best value?

As mentioned in the introduction, FireServiceRota was awarded the highest score in the Lancashire Fire and Rescue tender. This is the result of over a decade of experience in supplying hundreds of fire stations with easy to use software to address their practical day-to-day needs. FireServiceRota takes pride in being software created by firefighters, for firefighters.

FireServiceRota complies with and exceeds most of the expected features mentioned in this guide. However, we believe that software needs to be flexible to adjust to ever-changing business processes and requirements. This is especially true for Fire and Rescue Services in the UK who are faced with changing policies, the need to increasingly interoperate with other blue light services, and to remain resilient with ever changing resource availability.

We strongly believe in a long-term partnership with the customer before, during and after implementation. By working as one team with our customers, FireServiceRota can guarantee not only to meet existing requirements, but to continue to do so through the evolving scenarios and challenges afterwards.



FireServiceRota provides cutting edge technology for Fire and Rescue Services.



The Agile approach increases the speed and quality of software development.

We collaborate with customers using the Agile approach. This approach increases the speed and quality of software development by working in small, manageable increments (sprints), and incorporate the frequent feedback of customers. Each sprint has inspection, testing and sign-off built in. It also ensures that functionality with the highest business value is delivered first, thereby maximising return on investment.

We have extensive experience with delivering our software in an agile way. This is what our customers have to say:

[Shropshire] have worked closely with [FireServiceRota] throughout the past four months and it is really impressive how rapidly they have introduced new features. This has enabled us to introduce a new and quite unique working pattern in Shropshire with the confidence that the software has the flexibility to allow us to change in future.”



*Sally Edwards
Shropshire F&RS ICT Manager
March 2017*



*Ryan Hall
Jersey F&RS Watch Manager
September 2016*

“Experiences working with FSR are refreshing. The team is very proactive and efficient. Building our account to what we use today has been nothing but first class service.”

To get access to the Framework Agreement resulting from the Lancashire tender and to evaluate FireServiceRota versus the other 2 awarded suppliers, please contact LFRS at procurement@lancsfirerescue.org.uk

They will provide the Access Agreement to the Framework Agreement details. During a mini-competition process the best value provider for the service's specific goals can be selected.

Conclusion

Achieving efficiency while providing the highest level of service to the public has become a dauntingly difficult task. However, by choosing the right Availability, Payroll and Rostering Systems, fire authorities can get back in control and optimise crew management in both retained and wholetime stations.

The objective of this document was to provide a scope of the criteria to keep in mind while evaluating software for the Fire and Rescue Service. We acknowledge that every single station has its own challenges and conditions. This is why we encourage to search for a system that has the flexibility to adapt to the specific needs of your organisation.

FireServiceRota can become a valuable partner to Fire and Rescue Services by tailoring our software to meet their current requirements, and continue to do so through the ever-changing times.



FireServiceRota
www.fireservicerota.com

Afterword

We would like to thank Gabriel, Lead Marketer at FireServiceRota, for his hard work putting together this guide.

We will be happy to hear your comments, questions and feedback about this guide. Was it helpful? Do you think there is any information missing? How can we improve? Please email us at cor@fireservicerota.com and ruben@fireservicerota.com