OpenHorizons
magazine

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OpenHorizons
magazine

Issue 38: Contents

Cover image: Domed roof of Sony Centre, Potsdamer Platz, Berlin
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Discover The New

As this issue of **Open Horizons** Magazine was being prepared to go to press the news on 1 September was that the $8.8bn deal between Micro Focus and HPE Software had successfully completed. *Discover the New* is the tagline of the moment as the two companies come together, offering over 300 different products to the marketplace. Take a look at the updated home page of Micro Focus at www.microfocus.com to get a quick overview of the new company.

Undoubtedly this is an exciting time and many Micro Focus insiders and supporters are celebrating, but perhaps the reality is that the hard work is yet to come. The businesses have to be integrated and product strategies refined. *"It means we'll change everything: you start with the top management team, which has already been announced. We will literally look at every aspect of the business and make it as efficient as possible"* said Kevin Loosemore as reported in the Financial Times (31 August). However the senior management are confident of a secure profitable business and are already looking forward to further acquisitions. Read more about the deal and the new CEO, Chris Hsu, in the article starting on the next page.

While the merged business might seem strange and new, it is reassuring for **Open Horizons** members that **TechConnect** (formerly GWAVAcon) will be running in mid-September in Berlin. Again it will highlight the latest in collaboration, endpoint, OES and file management technologies from Micro Focus. Diethmar Rimser will also be there presenting a number of sessions on behalf of **Open Horizons** – thank you Diethmar!

Micro Focus will introduce GroupWise TeamWorks at TechConnect, the latest addition to the collaboration portfolio. Attendees at the **Open Horizons** Summit back in April will remember the Uinta demonstrator that was running during the event. Much work has gone into development since then and Mike Bills will discuss it's role and position in the Micro Focus Enterprise Messaging suite. If you can't get to TechConnect then the next best thing is to read Wes Heaps article on TeamWorks starting on page 7. Then carry on reading to learn about other new product enhancements and the latest developments. Discover The New!

12 + 26 = 7: The Micro Focus Merger

Merger with HPE Software division forms the world's 7th largest enterprise software company

On 1 September, on schedule with no apparent hitches, Micro Focus completed the merger with HPE Software Division and the new Micro Focus was born. In acknowledgement of the significance of this $8.8bn deal the New York Stock Exchange bestowed the honour of ringing the bell to signal the start of the new business day and trading in the new Micro Focus stock. The new company becomes a key player in the software industry and **"brings together two leaders in the software industry to form a new, combined company uniquely positioned to help customers maximize existing software investments and embrace innovation in a world of Hybrid IT."**[1]

Micro Focus is designed from the ground up to build, sell and support software. With more than 5,800 employees in R&D, the combined company helps solve the most complex technology problems for customers, delivering world-class, enterprise-scale solutions in key areas including:" DevOps, Hybrid IT, Security & Risk Management and Predictive Analytics.

On the first day of trading the share price fell early on before recovering to £22.70, giving the company a value of almost £10bn (approx. $12bn) after issuing 222m new shares to HPE investors. The deal creates the UK's largest technology company (and Europe's second largest software company) although HPE shareholders now own 50.1pc of the combined group.[2]

Prior to completion both sides have been working hard on the structure of the new organisation and filling key business roles. What we do know so far is that Kevin Loosemore will remain as Chairman of the new Micro Focus, but he will hand over CEO responsibilities to Chris Hsu, who currently has joint responsibilities at HPE as Executive Vice President, General Manager, for HPE Software and Chief Operating Officer at Hewlett Packard Enterprise.

Who is Chris Hsu?

Looking at his LinkedIn profile Chris Hsu has had a distinguished

Ringing in the new Micro Focus at the New York Stock Exchange.   *©NYSE*

career, starting with the US Army where he was at one point a tank company executive officer. While on exercise in a European war game he was recognised for outstanding leadership by the Chief of Staff of the Army. Before his active service he studied for a degree in economics at the West Point Military Academy.

Chris left the army in 1997 and took a job for three years as assistant marketing manager with General Mills before deciding to go back to studying for an MBA at Northwestern University's Kellog School of

Chris Hsu: The CEO of the new Micro Focus

Management. This in turn led him to a position with McKinsey and company, a leading management consultancy where he stayed for almost 6 years.

Before joining HPE in 2014 Chris worked for 7 years for KKR, a pre-eminent American private equity company with international interests, specialising in leveraged buyouts.

The future Micro Focus?

As Open Horizons members will have become aware in the last three years or so, Micro Focus is an ambitious company that has grown through a series of well thought out acquisitions, culminating to date with the multi-billion dollar merger with HPE Software. In fact as Chris Hsu has pointed out Micro Focus has increased its capitalisation by over 700% in the last 6 years – outperforming the well known

Micro Focus News

The Micro Focus growth story

giants such as Amazon, Facebook and Microsoft.

Is this the end of this phase of growth? Almost certainly NO if the comments of Chris Hsu are anything to go by. The following is taken from a blog post[3] he published at HPE on 14 July.

He writes: "Upon close of the planned spin-merge, the new, **combined company** will be the 7th largest pure-play software company in the world and will sit amongst some of the most dominant software players in the industry. But what excites me the most is not the list of companies to the left of the #7 position in the chart below but rather all of the companies to the right—and of course the many companies not even listed here. **This is an industry that is ripe for continued consolidation and we expect to be in a great position to take the helm."**

"Experience, performance and longevity are all keys to why I believe Micro Focus is the right partner for HPE Software – together we will have the global scale needed to best serve our customers and partners. So let me wrap it up with the top 3 reasons I am personally excited about this pending merger with Micro Focus.

1. **HPE Software will become a pure software company**. From a $3.1B software business inside of a $100B hardware company, to an independent, software-focused company with estimated annual revenues of $4.5 billion, 18,000 employees, and 40,000 customers.

2. We expect **the combined portfolio** will have real **breadth and depth** to help solve more customers' challenges from mainframe to mobile.
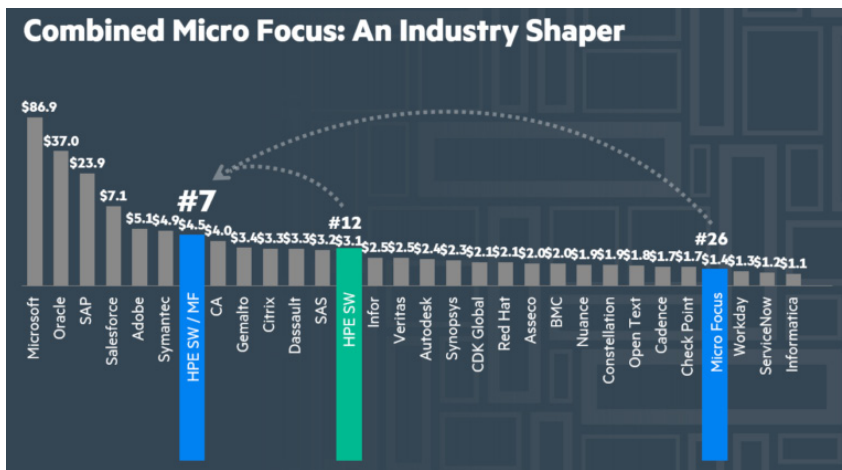
3. We intend to build a **strong operational foundation** that will bring the best of both

companies to the forefront. When you prepare for a global merger of this scale, it gives each company an unprecedented opportunity to look at all of their processes and take steps to We have had the luxury of stepping back and asking *"How do we transform our IT platform to support our strategy for tomorrow?"* Few of us ever get this opportunity. Once the transformation is complete it will be truly industry leading. "

In fact the merger represents a substantial opportunity to[4:]

• create significantly greater scale and breadth of product portfolio covering largely adjacent areas of the software infrastructure market

• add a substantial recurring revenue base to Micro Focus' existing product portfolio, together with accessing important new growth drivers and new revenue models; and

• accelerate operational effectiveness over the medium term, through the alignment of best practices between Micro Focus and HPE Software in areas such as product development, support, product management, account management, and sales force productivity, as well as achieving operational efficiencies where appropriate.

Exciting times ahead. Watch out for further Micro Focus news and discover the new Micro Focus.

References

1. www.microfocus.com/about/press-room/article/2017/micro-focus-completes-merger-with-hpe-software/

2. http://www.telegraph.co.uk/technology/2017/09/01/micro-focus-becomes-uks-biggest-tech-company-completes-7bn-hpe/

3. https://discoveringthenew.com/who-is-micro-focus/

4. https://investors.microfocus.com/our-business/hpe-merger/

There are further opportunities for Micro Focus to grow

A First Look At GroupWise TeamWorks

An Exclusive Component of Micro Focus Enterprise Messaging

by Wes Heaps

You've been with GroupWise for a while, right? Maybe you're feeling it's a bit dated. After all—there are emerging trends in enterprise communication that look new and exciting. These social enterprise networking trends promise everything from more employee productivity to the "death of email". But GroupWise is just email, right? Wrong!

With Micro Focus Enterprise Messaging, you can now expand the functionality, security, and social enterprise networking abilities of GroupWise. GroupWise TeamWorks (available only through Micro Focus Enterprise Messaging) brings the excitement and productivity of the latest social enterprise networking trends to GroupWise, without having to sacrifice the proven track record of email. Rather—working together, GroupWise and GroupWise TeamWorks launch a new era for Micro Focus collaboration and proves you've invested in a solid, secure, and progressive communication platform built for modern and mobile enterprise messaging.

Micro Focus Enterprise Messaging?

First of all, let's tackle what Micro Focus Enterprise Messaging is all about. For those that have GroupWise and are current on maintenance—you now have two options with the release of GroupWise 18. The first option is to just upgrade to GroupWise 18 and get all the benefits of integrated Messenger, better Filr integrations, and the renewal of the product lifecycle when it comes to support.

However, if you're looking for the most that GroupWise can bring to your organization—you should upgrade to Micro Focus Enterprise Messaging. This new product not only brings you GroupWise 18 (along with all the benefits there), but also a host of other features—like back-up and recovery of your GroupWise systems, archiving of email, better and easier mailbox management, antivirus, anti-spam—and to top it all off, the fun and functionality of GroupWise TeamWorks. (Figure 1).

What is GroupWise TeamWorks?

If you're a long term GroupWise user, you know all about GroupWise

Figure 1: The Micro Focus Enterprise Messaging suite

Messenger. Messenger allows you to have instantaneous chats with other GroupWise individuals or even groups of your coworkers.

While Messenger is a great tool—the drawback of it is that it ends up splitting communications between email and instant messages. If your co-worker was not signed into the tool—you were essentially left with

Figure 2: GroupWise Messenger - a great tool but not the integrated answer

sending an email or your instant messages were not delivered to them.

Along came social media and the popular way they use their messaging functions. Start a conversation with a group of friends via their messenger tools—and you get instant notifications that there has been a new comment added. The message gets delivered, despite your online/offline status and is inserted into the flow of conversation. The popularity and functionality of these messaging tools is enormous—tackling everything from inserting pictures, sending files, and even transferring money. What if this paradigm were extended to work communications?
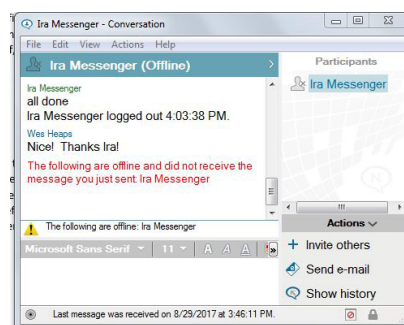
Enter Enterprise Social Networking—a way to build communities and

Enterprise Social Networking...can radically transform the way a business can get work done.
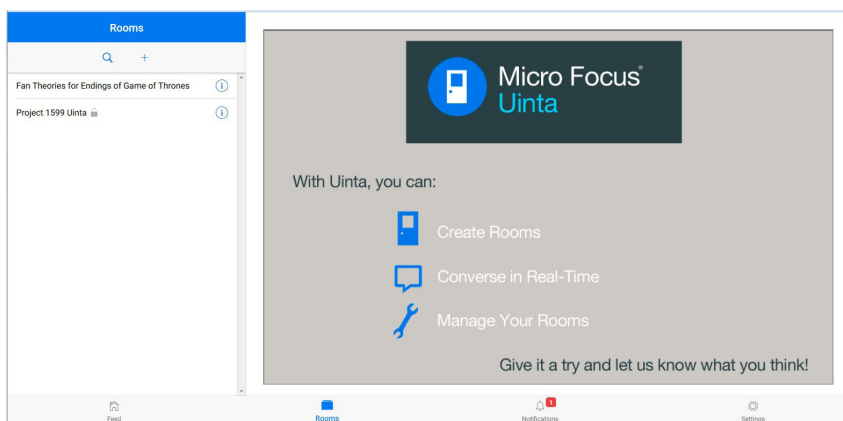
GroupWise TeamWorks

Figure 3: The TeamWorks home page

Figure 4: Creating a room is very straight forward

communications based on social networking frameworks. It's new. It's exciting. It can radically transform the way a business can get work done. But does this mean you have to abandon email altogether? And what if you've already invested in an email solution like GroupWise?

For over a year now—we've talked about and even shown (at the OH Summit 2017 for example) tantalising hints of something called GroupWise Uinta. That project and codename is finally coming to market—in an evolving product called GroupWise TeamWorks. GroupWise TeamWorks brings the communication paradigm used in social networking to your GroupWise email community—allowing for instantaneous (yet persistent) conversations around topics, teams, and projects for better productivity and more engagement.

TeamWorks will be available small scale as an all-in-one (single server) appliance or for large deployments in multi-appliance formats, very similar to how Filr works today. Teamworks has its own message store but initially it will not be available as a standalone product - available only when upgrading to Micro Focus Enterprise Messaging. At version 1 Teamworks will be for internal company users only.

So let's dive right into the product! The desktop home page is shown in figure 3.

(You'll notice the product is still using the "Uinta" codename on the screenshot. By the time the product ships, it will all be called GroupWise TeamWorks.)

Rooms: your conversation place

Suppose you're the lead software engineer trying to develop a new product. That's going to involve many different people and conversations. You have to work with an engineering team that will have to share confidential information about development. You might also have to engage larger teams doing market research, garnering user needs, or getting beta tester feedback. All of this might be tackled through in-person meetings, instant messaging, or email.

With GroupWise TeamWorks, you can simply start a conversation with different individuals and teams to get much of the needed information to work on your new product.

First of all, the engineer would need "rooms" to have these different conversations in. Rooms are where you start, participate, and manage

> GroupWise TeamWorks brings the communication paradigm used in social networking to your GroupWise email community
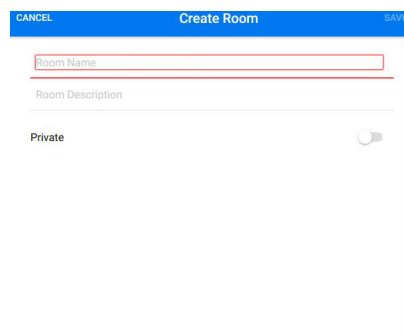
all your GroupWise Teamworks conversations. Creating a new room is as simple as clicking on the "+" and deciding on a name for your room, along with a description for it. You also have the option of making the room private or not.

- **Public Rooms** are visible to and can be joined by anyone. They are discoverable through the search function as well. Members of the room can leave the conversation at any time—and have full control over their private notification settings for the room. By default, all rooms created in GroupWise TeamWorks are public unless marked as private.

- **Private Rooms** are not visible or searchable by the general users of GroupWise TeamWorks. Users of a Private Room must be added and deleted by the person who set up the room itself. Other users of the room can see who is included in the room, but cannot add or invite others.

  Individual members of the Private Room cannot delete themselves from the room group either. However, they still control their private notification settings about the conversations happening in the room and can choose to leave the room itself, but will still have access to the room as long as they remain a member of the room group.
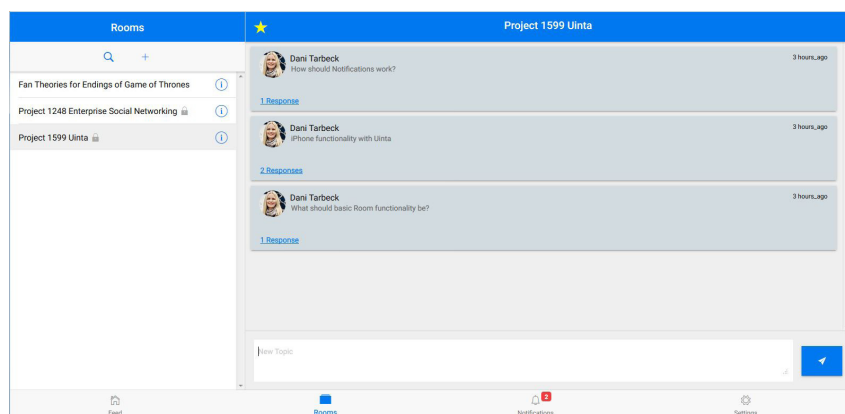
Figure 5: Start multiple conversation topics within a room
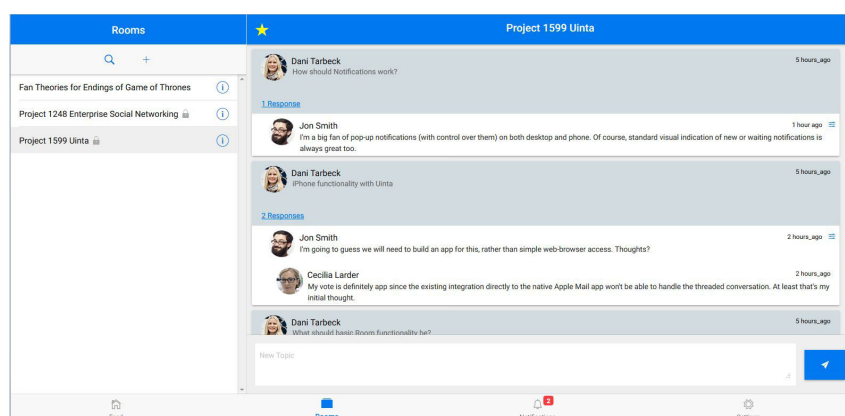
Figure 6: The conversations begin - answers are indented
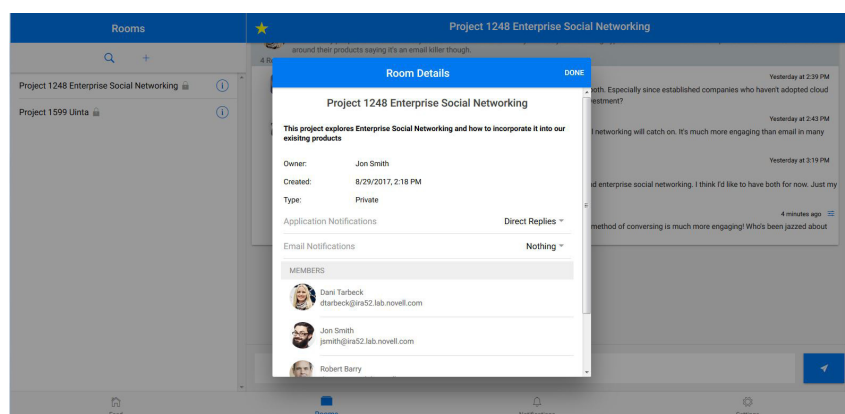
Figure 8: Notification settings

Figure 7: Attractive notifications - clicking on one takes you to the comment in the room

GroupWise TeamWorks

that each response is indented according to what topic or response was commented on (figure 6).

Notifications: knowing when someone has commented

In GroupWise TeamWorks, there are several ways to control how you get notified when someone has contributed to a conversation. Clicking on the "Notifications" badge at the bottom of the page pulls up the Notifications pane. This allows you to easily see who has commented on a topic or responded to your latest comment. Clicking on any of the comments in the Notifications pane brings you to that particular spot in the conversation and allows you to see how it all flows together. This allows you to respond to the original comment, or any of the replies in the thread. (figure 7).

You control how you are notified and what you are notified about through the Room itself. Clicking on the information circle (an "i" in a circle) on any room will bring up a control panel that allows you to determine how you will be notified of new responses. You can either

Topics: the starting level of all conversations

Once a room is created (and members invited if it is a private room), you simply start interacting by entering a room. Once any room is entered, you have the ability to start a new topic of conversation right from the room's root level. (figure 5).

As room members engage with a topic— all responses are noted in the topic itself, and new responses are noted in the notifications badge at the bottom of the page.

Clicking on the responses to any topic lets you see all the responses in a nested thread that shows the flow of the conversation—including who responded to what comment. Notice

GroupWise TeamWorks

Figure 9: A pop-up notification

receive application pop-ups or email notifications—and opening each one determines if you will get notifications about direct replies to your comments, all comments in the thread, or no notifications at all as shown in figure 8.
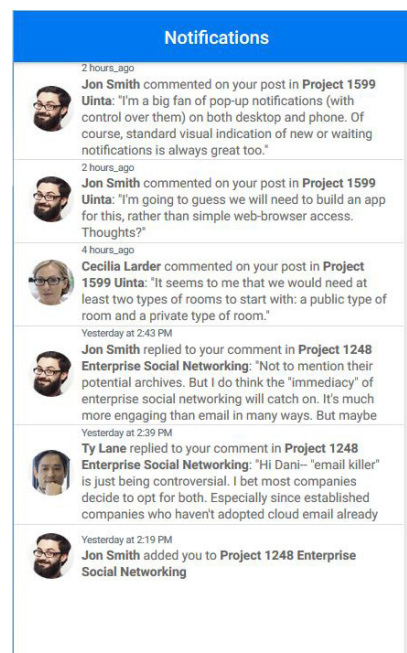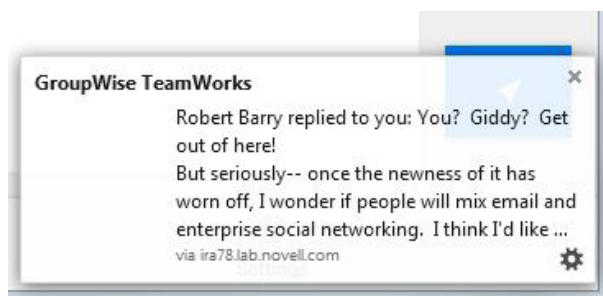
Pop-up notifications appear in the lower right corner of the desktop screen, much like those familiar with the GroupWise Notify pop-ups and contain who replied, either all or part of the message, along with a settings gear that allows you to quickly determine some of the notification preferences regarding the pop-ups themselves (figure 9, over page).

Getting to your Conversations

There are a few ways to interface with GroupWise TeamWorks. You can access via the Web by authenticating to the TeamWorks server. You can interface via iPhone or Android through mobile apps—or you can integrate GroupWise TeamWorks directly into the GroupWise 18 interface and have direct access to both your email and GroupWise TeamWorks conversations in a single desktop application.

This means GroupWise users can enjoy the both of best worlds—their traditional email, as well as the threaded, social conversations of GroupWise TeamWorks easily through a single interface. The benefit of this approach is that it removes the dilemma of email vs. social enterprise networking.

Both can be enjoyed from a single platform. Combined with the benefits of Messenger, GroupWise Mobility Service, and all the additional benefits of back-up, disaster recovery, archiving, improved mailbox management, anti-spam, anti-virus, and anti-malware—Enterprise Messaging is the way to go for a complete and modern communication platform.

The fact is, the nature of enterprise communications is constantly changing. GroupWise continues to adapt to and adopt new trends such as enterprise social networking—while evolving as platform with the release of Enterprise Messaging.

The release of Enterprise Messaging, along with the development of GroupWise TeamWorks, shows that Micro Focus is serious about maintaining a modern enterprise messaging platform built for today's dynamic and mobile world.

Wes Heaps has worked for Novell, NetIQ, and now Micro Focus for over 16 years. He's been involved with Novell's technical journal, Novell's developer journal, education and training services, identity and security marketing, IT operations marketing, and collaboration marketing. He's currently a Solutions and Product Marketing Manager. When he's not at work, he's usually found in a pool, swimming or playing water polo.

Advanced Walkup Print Job Release In Micro Focus iPrint

by Lothar Wegner

In early 2016 iPrint 2.0 was released with a host of new features one of which was WalkUp printing – and enhanced in iPrint 3.0 earlier this year (see the article *What's New in iPrint? by Punya Mall,* in *OHM37, 2017/2, p5-9*). This eagerly awaited new feature allowed our customers to send print jobs to a virtual queue and then release them to the printer of their choice at the time of their choosing. While this was a powerful feature that many customers eagerly wanted, it did come with some drawbacks. The biggest hurdle for customers was the fact that it required the user to log into a web portal to release a print job.

Fortunately, we quickly released an update that allowed customers to release print jobs via the mobile app. While this update was an improvement, it was still cumbersome to pull out your mobile phone when you wanted to release a print job.

In iPrint 3 we added yet another job release mechanism for WalkUp Printing. Proximity cards using an external RF IDeas Ethernet 241 device. Alongside the release of this feature was an API that allowed other interested partners to also develop solutions to take advantage of WalkUp Printing.

One such partner is Apulse Technical Communication Co., Ltd. (ATC, sna. com.tw)). ATC first came to my attention when a customer sought a mechanism to use PIN codes to release print jobs. Now the ATC iPrint Card Reader is an all-in-one device specifically designed for the Micro Focus iPrint Appliance.

ATC's device has a numeric keypad and a card reader and supports both. It fits the bill perfectly. I reached out to Doctor Hung (doctor@sna.com. tw) from ATC, and he was gracious enough to provide me with a test device. I've been having a lot of fun testing the unit since receiving it and thought I'd share some experiences with you.
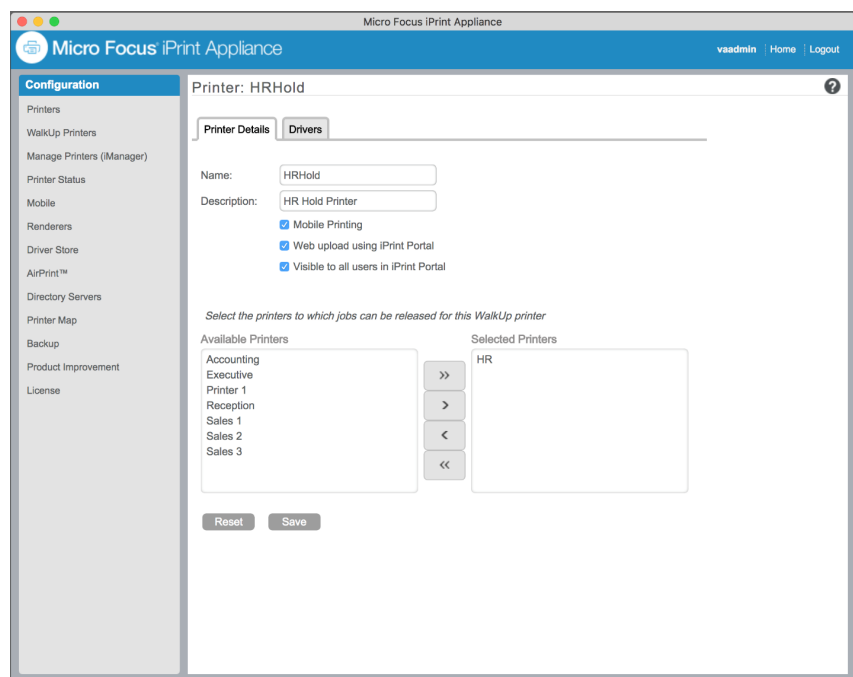
Figure 1: Creating a new WalkUp printer in iPrint

iPrint Setup

Before getting too far ahead of ourselves, we need to take care of a few basics first. Let's take a look at some of the iPrint setup that you will need.

Clients or Clientless

To start a print workflow, you obviously need to submit a job. There are a couple of options here. Use iPrint clients/apps or simply go clientless with Quick Print. If you have a customised application, print client functions can be embedded into it, for job submission.

WalkUp Printing

As mentioned earlier WalkUp printing is a virtual print queue that you can assign to one or more printers, where the print jobs will be held until they are ready to be released. To create a new WalkUp printer from the iPrint Administration Console:

- select WalkUp Printers and *New*
- name the WalkUp Printer
- add a Description, (optional)
- select further options
- select all of the printers that will service this queue
- click *Next*
- assign the proper drivers to the queue

iPrint

Note that you must pick something that all of the printers can understand. Optionally add a printer address to provide status information, and then click Finish. You've now created a new WalkUp Printer that will hold any print jobs until they are released by the user. For more details on the configuration, please see Figure 1.

If you step back for a minute and think about the workflow I've just described—the print job is tied to the user, and the user must release it—you will realise that we're not quite done yet. In order for the job to be tied to the user, the printer is by definition a Secure Printer. iPrint creates the new WalkUp Printer as such, and you still need to assign rights to the users to be able to access the printer.

From the iPrint Administration Console, launch Manage Printers (iManager) to add the rights. Once you log in, from the iPrint | Manage Printer menu, browse to select and access your printer. Under Access Control, add all the users (individually, as a group, or a container) who will be allowed to access this printer. At this point it's probably a good idea to test the WalkUp Printer configuration to make sure it works by itself.

Directory Synchronisation

In order to release a print job via a PIN/Passcode or a "smart card" of some sort, you need to store the code or the ID of the card somewhere. To tell iPrint where this information is stored, go back to the iPrint Administration Console and select Directory Servers. Click on the LDAP profile(s) that you have listed here to edit the configuration. Check the box next to User Card Release for printing jobs. In the box below, you will need to enter the directory attribute that you are using to store the code/ID. In my demo, I chose "employeeNumber." For details of this configuration, please see figure 2.
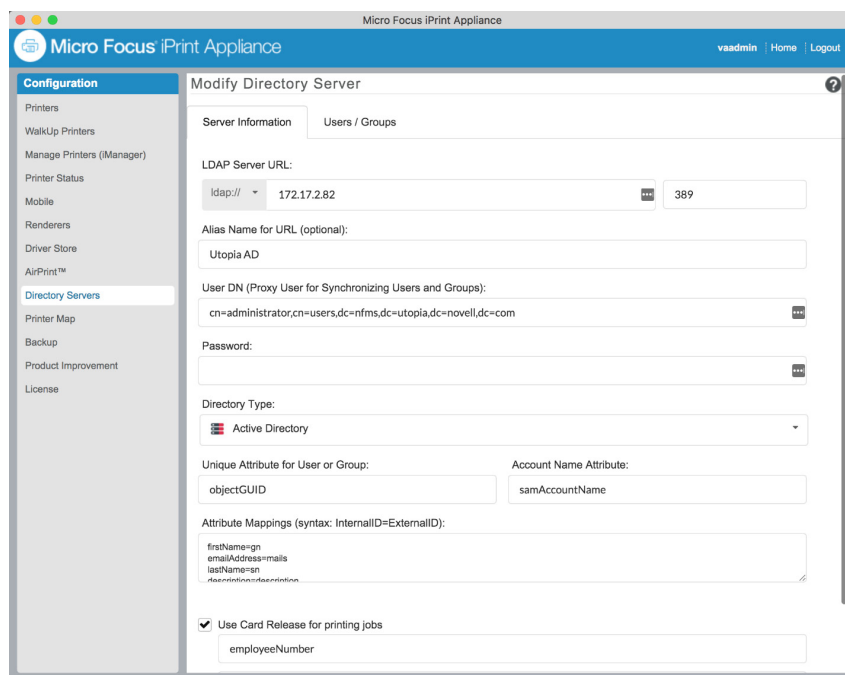
Figure 2: Setting directory synchronisation
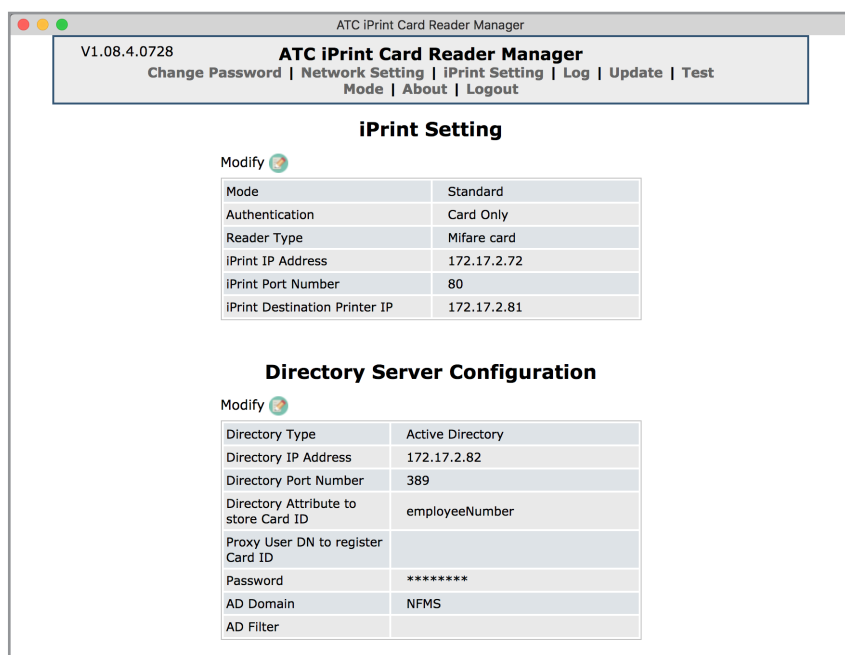
Figure 3: Configuring the ATC card reader

ATC Reader Configuration

With the iPrint configuration complete, it's time to set up the ATC iPrint Card Reader. Out of the box, the reader comes with the following configuration:

Default IP address: 192.168.0.18
Default subnet mask: 255.255.240.0
Default DNS: 192.168.0.250
Default gateway: 192.168.0.1

Default Web URL:
http://192.168.0.18/cardweb/index.jsp
Default User: admin
Default Password: Password

As with other devices that come preconfigured with an IP, you will need to set your computer's IP address to something on the 192.168.0.x subnet, connect a cross-
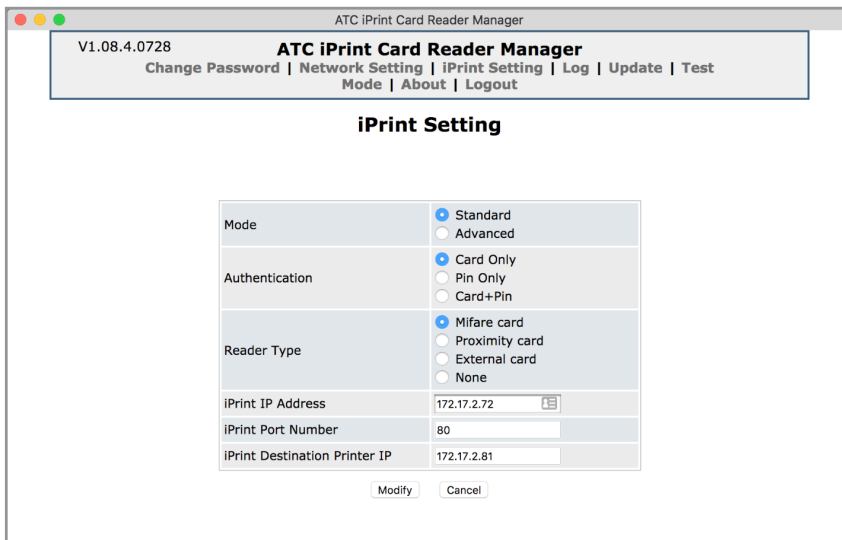
Figure 4: Specifying the card reader type
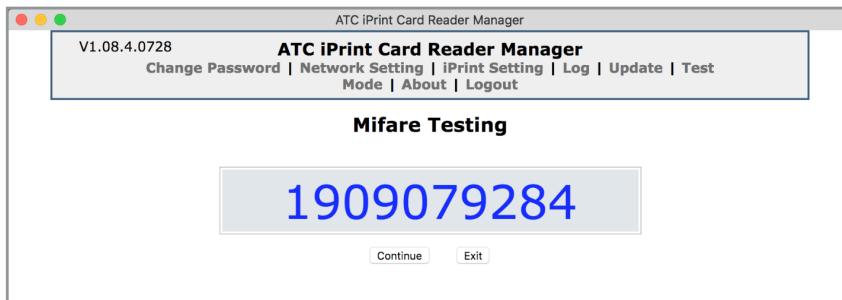
Figure 5: Testing a card - the reader displays the value from the card
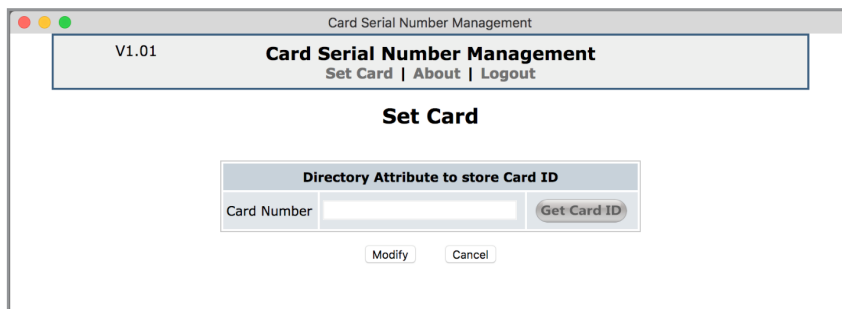
Figure 6: Assigning a card id to its owner

over cable or connect both devices to a hub. Next, open a browser to start configuring the device. The first menu option will be to change the default admin password. Next, you can modify the Network and Time settings as appropriate to your environment. The third tab is the iPrint Setting option—see Figure 3. Select Modify for the iPrint Settings:

• Keep Mode at Standard.

• Under Authentication, choose the type of authentication you will want to use: card, PIN code, or both. Again, the values

of these will be stored in the "employeeNumber" attribute above. If you select both, the values need to be stored in the format of "<card ID>.<PIN>" for example 12345678.1234.

• For Reader Type, select the card reader type that you have. In my case, I have a Mifare card reader.

• iPrint IP Address is the iPrint server IP address.

• iPrint Destination Printer IP is the IP address of the printer that the Reader is sitting next to where you want to release print jobs.

When a valid PIN code is entered or a card is read, the Reader communicates with iPrint to check for jobs that are owned by that code/ID (user) and asks it to release the jobs to that printer. For details on this configuration, please see Figure 4. For the Directory Server Configuration, simply enter the IP, Port, and other information for your LDAP server.

Before leaving the Reader configuration, you'll want to head over to the Test Mode tab. Here you can confirm not only that your connection to iPrint works but that there is also a test to make sure the Reader itself works. You can confirm that all of the buttons on the numeric keypad work and also that your cards are being read properly. When you test a card, the Reader will display the value that it read from the card. See Figure 5.

The ATC Reader also includes a management console to assign card IDs to the owners of those cards. Using the configuration you provided in the Directory Server Configuration, your users can then visit *http://<ATC_Reader_IPaddress or host_name>/cardweb/csn/index.jsp* and log in with their credentials.

They can then simply enter their PIN and/or swipe their card to record their information and associate it with their user ID. For details on this, please see Figure 6.

Directory Configuration

In my setup, I am using Active Directory. If you go into Active Directory Users and Computers, you can edit the attributes for the desired user and enter the card value that you read in the AT Reader. See Figure 7 (over page) for an example of a user configuration.

Ready to Print!

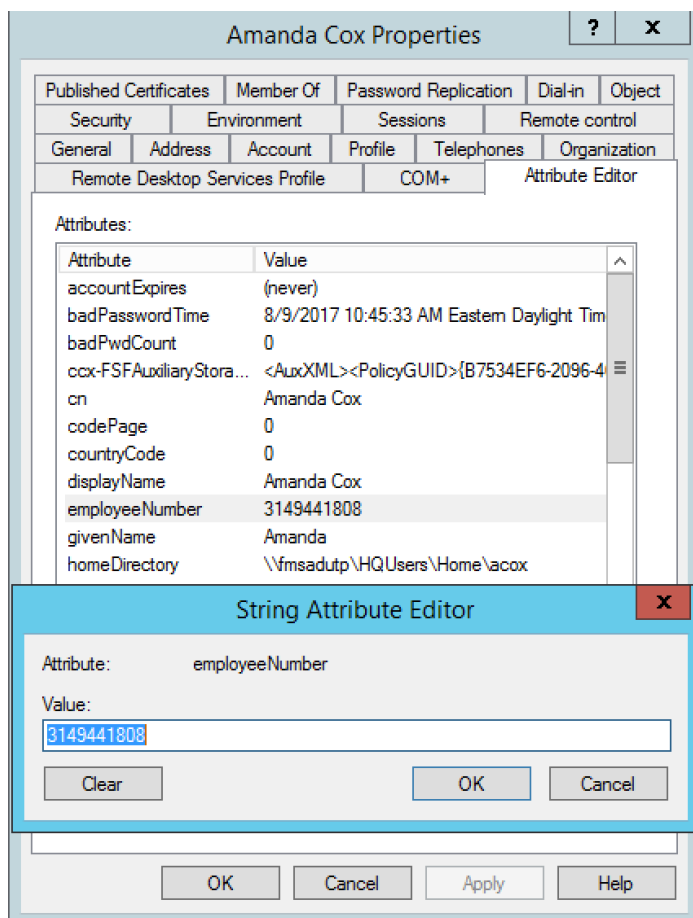At this point you should be ready to print. Simply submit a job, via

iPrint

Figure 7: Configuring the user details in Active Directory

whatever means, to your newly created WalkUp printer. You can verify that the job is being held in the appropriate WalkUp print queue by logging into the release portal at *https://<Appliance_IPaddress or host_name>:9443/release-portal.*

You should see your job waiting

there. Next, go to the ATC reader and either enter your PIN code or swipe your card—depending on which options you chose to enable. If everything went right, you should hear a beep and see a green light on the front of the Reader. Within a few seconds, your job should come out on the associated printer.

For more information about the ATC reader, please contact Doctor Hung at doctor@sna.com.tw.

I have produced some YouTube videos showing the ATC Reader in action that you might be interested in:

- Using just a PIN/Passcode *https://youtu.be/fF2syl8WQC8*
- Using a Mifare Card *https://youtu.be/491ASJfCMhM*

What's most exciting are the opportunities that this capability offers. In the second video, I utilise a hotel room key to release a print job. Not only can obvious things like employee badges or student cards be used but also hotel room keys, loyalty or membership cards, library cards, payment cards, etc. The opportunities are virtually limitless.

Hopefully, you'll find your own use for using WalkUp printing with a suitable release mechanism in your environment.

Lothar Wegner, is based in North America, and has worked as a Systems engineer for Novell/ Micro Focus for 19 years on File and Networking solutions and the Collaboration portfolio. He is responsible for the upkeep of the Utopia standardised demos and MODS, the Micro Focus Online Demo System (formerly NODS).

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iPrint for Open Enterprise Server

There's a new update to iPrint available for the latest version of Open Enterprise Server: OES 2015 SP1, writes Wes Heaps.

For those who've kept track of what's happening with iPrint in OES, there have been two main ways to deploy iPrint—either in conjunction with OES or as a stand-alone, virtual appliance. There are benefits to each way of deploying these.

The features between the virtual appliance and the OES-included version have not always kept parity with each other. Many of the newer features that make iPrint a great choice for enterprise printing were lagging behind in the iPrint for OES version. The good news is—that's beginning to change with this latest release. So what's new to iPrint for OES with this latest release?

- WalkUp Printing: Save costs, while creating convenience to release jobs on any printer.

- Mobile-Ready: Micro Focus iPrint for OES is ready to process jobs from mobile devices.
- Chromebook Support
- Policy-based purge: Automatically purge the files in the salvage system based on policies.
- Email Print: Send an email to the printer to print with a Global mail ID or private mail ID for printers.
- Cluster-aware: All features from Micro Focus iPrint for OES are cluster aware and will work with your Micro Focus iPrint resources on cluster.

Creating Reports From The Vibe SQL Database

by Diethmar Rimser

"Micro Focus Vibe (formerly Novell® Vibe) brings people, projects, and processes together in one secure place to enhance team productivity - no matter where the team is or what devices they use" is how the Micro Focus website introduces Vibe (www.microfocus.com). So the main purpose of Vibe is team collaboration – loose or tight.

To handle all this information and these requests a SQL database is used in the background to store values, states and much more:

• Structural information about workspaces, folders, and entries (for example, their location in the workspace tree)
• Identification information about workspaces, folders, and entries (for example, titles, descriptions, dates of creation/modification, and users associated with creation/modification)
• User profile information (for example, full name, phone number, and e-mail address)

The Vibe database disk space requirements are relatively modest, because the database is not used for storing files. This article will describe how I access the SQL database directly.

Why access this database directly? I see two main reasons: customers have asked me to present values, information or properties of their Vibe environment which Vibe does not deliver by itself, and the second reason is a little bit more selfish – it's my academic approach. I want to know more about what's happening in the background and how the pieces fit and work together.

The next paragraphs will illustrate how I tried to solve a puzzle of values, records and tables within SQL. My customer's request was to deliver a list or an overview of assigned rights - a spreadsheet to show which individual rights are set for users or groups within a Vibe environment; especially which access rights are active for group *allusers*. There is no report within Vibe to get this – especially for groups.

As mentioned above Vibe is about team collaboration – loose or tight. Some companies use Vibe for intranet purposes, some companies use it for document management including versioning, workflows and

Figure 1: MySQL Workbench Connection to the Vibe database

even more, because there are no boundaries to customisation.

Independent of its purpose, access rights will arrange and organise *who* and sometimes *when* someone - if a workflow is in progress – is allowed to see, change or even delete contents.

Vibe offers features like *What's new, What's unread, Follow places or people* and full text searches. Therefore access rights are essential in a collaboration environment! Everyone should see only those pieces of information which they are intended to.

For example some default rights are set during installation and maintenance – particularly for the group *allusers* which is a system group that is allowed to read in global workspaces, but also in personal

workspaces too, if the administrator does not change the default settings.

That is the reason my customer asked me for a list of rights for *allusers*. He wants to minimise administrators' headaches which already caused this request.

Environment & Tools

My description and experience is based on Vibe 4.0.x and MySQL 5.5. I know Vibe well but I am not an experienced SQL programmer or specialist. To build my statements and scripts I used the internet to get hints and solutions. So please do not argue with me that my SQL statements are not efficient enough or there is a better way to do it. The main purpose for this article is to show how easy it is to get to and read additional information out of Vibe.

Vibe Reports

I used MySQL Workbench 6.0 on Microsoft Windows to find the right relationships, values and entries. But there are other tools too with a similar purpose (e.g. HeidiSQL - which is not an Austrian product!).

My workbench connects to MySQL via port 3306 . Maybe your MySQL database allows only local connections with remote connections refused. So you have to solve this issue first – the internet will help you. (See Figure 1 - previous page)

After connecting successfully you will see at least two databases. **sitescape** is the database we need. A bundle of tables will be listed on the left side after opening Sitescape. It seems that only tables starting with "SS_" are relevant for our task.

Enhancing a table will show which columns are in use for this table. In my example I have selected *SS_WorkAreaFunctionMemberships*, which contains columns:

- id
- lockVersion
- workAreaId
- WorkAreaType
- zoneId
- functionId

Digging through Database Tables

There are so many tables, so many fields and different id fields. I need knowledge of how these tables are related behind the scene. What is their relationship? I just see numbers (=ids), which do not really help because there are no numbers or ids displayed in my Vibe user interface.

To make investigations easier I created a folder within my personal environment specifying a unique folder name. An unique title makes searches easier! For my final purpose I set access rights for group *allusers* because I want to get a list of folders and workspaces where *allusers* has individual access rights.
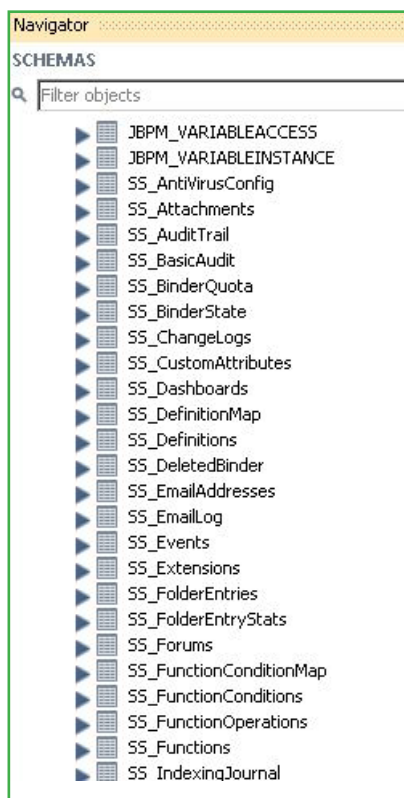
Figure 2: List of tables in the sitescape database

Now my analysis starts – I dig through the database tables to find out where my unique name appears again. A simple view of table contents can be done with "select * from table-name". An additional filter allows me to focus on the right record. A table named *SS_Forums* delivers success – one record shows my unique folder name which is fortunately really unique. My folder's id is "1006".

By touching many of these tables and checking out their contents I have found out that *SS_WorkAreaFunctionsMemberships* is
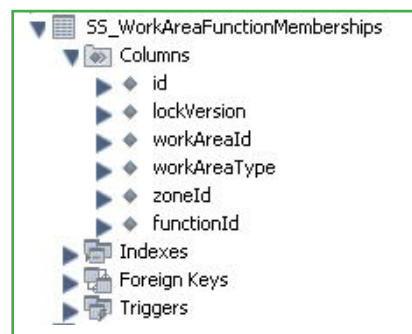
Figure 3: SS-WorkAreaMemberships table

probably my candidate for a central point of information.

Now I change my method of investigation – and start with paperwork. I like drawing – when troubleshooting or for a clearer understanding of processes I use paper. I draw how my brain sees links, connections and relationships. So let's take out a piece of paper and start drawing!

My assumed candidate will be placed in the middle of the paper. Field *workAreaId* – value 1006 – points to *SS-Forums*, where I find my unique name. Another field called *functionId* leads to table *SS-Functions* and further on to *SS_FunctionOperations;* where *functionId*'s value is "37".

Next I try to find out who is allowed to execute these functions. *SS_ WorkAreaFunctionsMemberships.id* is linked to *SS_WorkAreaFunctionsMembers. WorkAreaFunctionsMembershipId* – both have the value "357". From *SS_WorkAreaFunctionsMembers* and its field *member-id* (=17) I get
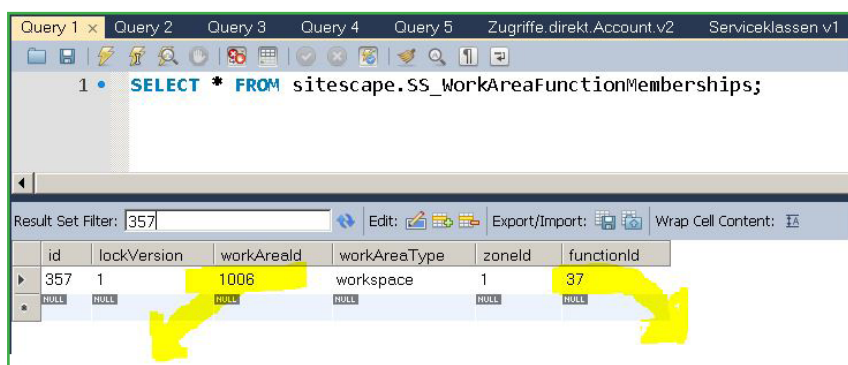
Figure 4: First SQL query

Vibe Reports
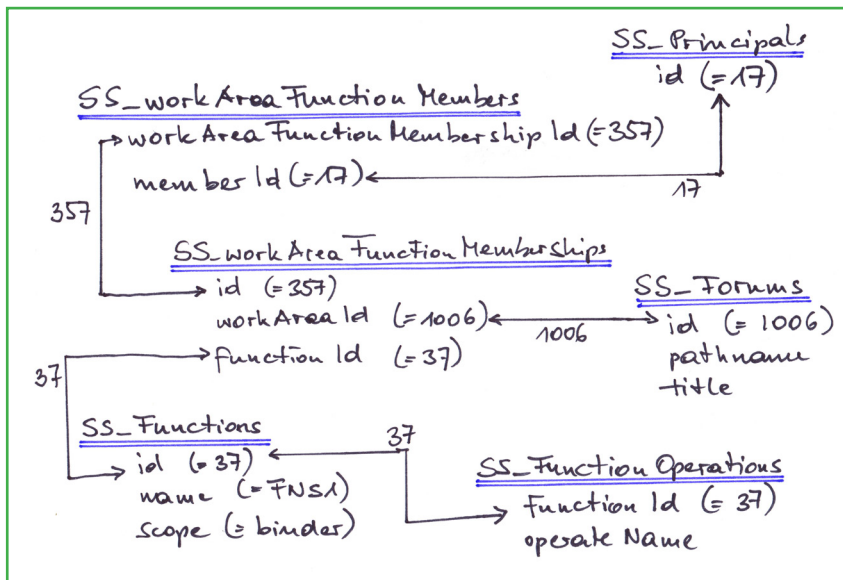
Figure 5: Working it out on paper

a connection to my final table *SS_ principals*. *SS_principals* is the table which contains all users and groups; their names; their ids and a little bit more; i.e. a field "type" tells me if this record describes a group, a user or something else.

Now I have an initial picture:

- *SS_WorkAreaFunctionMemberships* presents via *SS_WorkAreaFunctionMembers* and further on via *SS_Principals* which has assigned rights for this folder or workspace.

- A branch via *SS_Functions* and *SS_FunctionOperations* shows which access profile has been activated. If I need more granularity then *SS_ FunctionsOperations* describes for which single rights a profile consists.

- Finally a relation link to *SS_ Forums* delivers the name of a folder or workspace.

Form a SQL Statement

My next and final task is to create a SQL statement. It seems that I will use 5 tables to get my requested results and different id fields link these tables.   JOIN … ON id1 = id2.

As I want to get a list of users or groups and their access rights I start with table *SS_Principals* and ask for entries that are members of (and so on).

After keyword SELECT I place the fields which will be part of my spreadsheet. Here are my selected fields (These capital letters will be explained below):

- P.id – Although I do not need the id it will be part of my spreadsheet.
- P.name – name of user or group
- P.type – so I know if this record describes an individual user or

group

- R.name – which access profile (=role) is active
- F.title – name of the folder or workspace
- F.pathname – a path description for this folder or workspace. This is really helpful if there exists more than one entry with the same name, i.e. a Vibe server can contain more than one folder named "2017" because every user can create one in his environment.

To shorten my typing I use a letter as a placeholder for my tables:

- P - *SS_Principals*
- R - *SS_Functions*
- F - *SS_Forums*

The WHERE verb will narrow a search.

- Please show all entries WHERE P.name = "Rimser" (exact value)
- List all entries WHERE P.name like "allu%" (starts with "allu").

After some trial and error I found my statement. It's shown in figure 6 below

So what about the output? Well that's shown over page in figure 7 after import to a spreadsheet.

What a relief - that's it. I get what I want and it's so easy to adapt this for similar purposes!

This spreadsheet shows some of the records after running my script. *allusers* is of type "group" and has some rights for folder *IT ToDo. IT ToDo* is located somewhere in my personal

```
SELECT P.`id`, P.`name`, P.`type`, R.`name` AS role, F.`title` as foldername, F.`pathname`
FROM sitescape.SS_Principals AS P
LEFT JOIN sitescape.SS_WorkAreaFunctionMembers AS M ON P.`id` = M.`memberid`
LEFT JOIN sitescape.SS_WorkAreaFunctionMemberships AS M1 ON M.`WorkAreaFunctionMembershipId` = M1.`id`
LEFT JOIN sitescape.SS_Functions AS R ON M1.`functionId` = R.`id`
LEFT JOIN sitescape.SS_Forums AS F ON M1.`workareaId` = F.`id`
WHERE P.`name` like 'allu%';
```

Figure 6: The working SQL statement

Vibe Reports

	A	B	C	D	E	F
1	id	name	type	role	foldername	pathname
14	2	allusers	group	__role.participant	Guestbook	/Home Workspace/Personal Workspaces/MyName2 User2 (user2)/Guestbook
15	2	allusers	group	__role.visitor	Global Workspaces	/Home Workspace/Global Workspaces
16	2	allusers	group	__role.participant	Global Workspaces	/Home Workspace/Global Workspaces
17	2	allusers	group	__role.visitor	IT ToDo	/Home Workspace/Personal Workspaces/admin (admin)/IT ToDo
18	2	allusers	group	FNS1	IT ToDo	/Home Workspace/Personal Workspaces/admin (admin)/IT ToDo

Figure 7: Results spreadsheet showing the group access memberships

workspace. Two access profiles have been set for this folder or workspace. "Visitor" (=__role.visitor) and "FNS1". __role.visitor is a system based role, but "FNS1" was created by myself.

This output is clear and short. It's easy to enhance this report and add additional information. e.g. if I want to know of which rights my role "FNS1" consists then I will retrieve requested information out of *SS_FunctionOperations*. My example above does not explain if *IT ToDo* is a folder or a workspace. *SS_Forums* will deliver that type of information.

Nevertheless my SQL statement fulfils my request – it is easy to run a report to see individual rights. In this article I used MySQL Workbench but there are several other ways to run reports too. You can use this command line statement or you can do some customising within Vibe to get reports via JSP.

Conclusion

My customer's request was to get an overview of access rights for individuals. The statement above delivers what he wants.

My personal academic approach has been satisfied too. My paperwork paved my path and made it possible to see what's happening behind the scenes in Vibe. I see tables, fields and some of their relationships.

Nevertheless I feel and fear that I have seen only some rooms of a much bigger building. There is a much bigger construction to store Vibe's data.

I have investigated only five tables but there are many more. I have used only tables starting with "SS_" but there are some other types too. It would be a lot more work to understand the whole data puzzle.

However if you want to customise Vibe then you want to change presentation and behaviour. This can be done with forms, HTML and JSP, **but you must not change the sitescape database. Never!** So do not change any columns, fields or tables!

Diethmar Rimser started working with Novell solutions back in 1985. As a professional instructor since 1994 he has taught both Novell and Microsoft solutions. Now all his consulting and training activities - at his company BrainAgents - are based around GroupWise, Vibe and Filr. He is a member of the Open Horizons management team.

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Build Big Screen Dashboards Using ZENworks Reporting

by Jason Blackett

One of the requests that I've heard several times over the years is to be able to create big screen dashboards for the teams that support ZENworks. This could be for any of the ZENworks products, including ZENworks Configuration Management and Micro Focus Service Desk. In this article I will help you understand how ZENworks Reporting and JasperStudio can be used together to create big screen dashboards that will help you quickly identify trends in the environment.

Before we get into the details, a quick word about the things you need:

- **ZENworks Reporting Appliance.** ZENworks Reporting is available only as a virtual appliance and is one of the downloads you can download from the same product download page you downloaded your other ZENworks products from. The ZENworks Reporting Appliance provides the web based reporting creation and dashboarding tools that we will use to deliver the dashboard.

- **JasperStudio.** JasperStudio is a tool for advanced users that can be used to create pixel-perfect reports. In this article we'll use JaspertStudio to create some small dashboard widgets that would otherwise not be possible from the web based Ad hoc viewer.

- **Reporting Domain**. A reporting domain is a metadata layer that eliminates the need for you to understand the database schema when building reports with the ad hoc report builder. Depending on the data you want to access you will need different domains installed. For the purpose of this article we will be using the ZENworks Domain.

First of all let's take a look at the finished product so that you know what it is we are building towards. Have a look at figure 1. This is just one of many possible dashboards that you can build with the techniques discussed in this article.

This dashboard offers a quick view of information about the devices being managed in the system and whether they are checking in as expected.

Building Adhoc Dashlets

We'll start by looking at how to build the dashlets created with the Adhoc report designer. These are by far the easiest dashlets to build. In the example dashboard these are the *Managed Devices by OS* and *Agent Distribution by Platform* dashlets. You can use the Ad Hoc designer to build chart, table and crosstab dashlets.

Agent Distribution by Platform Dashlet

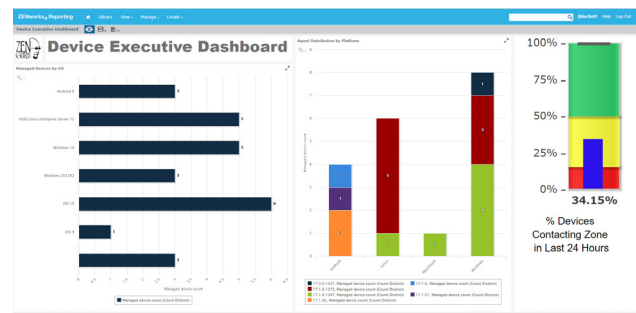The first dashlet for our dashboard will display a

Figure 1: A sample dashboard featuring 3 dashlets

breakdown of the agent and application versions being used on the devices in the zone. These will be broken down by platform and then by agent version.

1. Browse to your ZRS Server console (*https://<server>/jasperserver-pro*)

2. Login as a user that has permissions to create reports.

3. Select Create > Ad Hoc View.

4. From the list of domains, select the ZENworks Domain; then click OK.

5. You now need to select the data that you want to have available for this dashlet :
   - ZENworks System > Managed Device Status > Managed device count
   - ZENworks System > Managed Device Status > ZENworks Agent Version
   - ZENworks System > Managed Device Status > Platform

6. Click OK.

7. Next select the Chart type report and then drag the elements that you see in the screen shot below to the Columns, Rows and Filters area. This should result in a pie chart.

8. Next click the gears icon and choose Chart Types… and then select the Stacked Column chart type. Close the chooser and then slide the Data Level sliders all the way to the right. You should now have a chart that looks very similar to figure 2. Since this is a chart that will go on a dashboard, you can also hide the title since it will already be listed in the dashboard by clicking [icon] and toggling the title bar.

ZENworks Reporting

Figure 2: The completed Agent Distribution by Platform dashlet

Figure 3: The completed Managed Device by OS dashlet

9.   Now save this Adhoc View with the title that you want to appear on the Dashboard.

Managed Devices by OS Dashlet

The next dashlet shows you the distribution of OS's being managed in the environment broken down by major version.

1.   Select Create > Ad Hoc View.
2.   From the list of domains, select the ZENworks Domain; then click OK.
3.   You now need to select the data that you want to have available for these dashlets. The data required for building the Agent Distribution by Platform Dashlet is
     •   ZENworks System > Managed Device Status > OS Name
     •   ZENworks System > Managed Device Status > Managed device count
4.   Click OK.
5.   Because the data stored in the database does not include a value for OS and Version in a friendly way we'll use a Calculated Field to get the data in the form we want. To do this, in the fields header, click the dropdown and select Create calculated field.
6.   For Field Name, enter OS.
7.   In the Formula builder enter something like this

```
"IF(StartsWith("OS Name", 'Android-6'),
'Android 6', IF(StartsWith("OS Name", 'iOS-
10'), 'iOS 10', IF(StartsWith("OS Name",
'iOS-9'), 'iOS 9', IF(StartsWith("OS
Name", 'windows10'), 'Windows 10',
IF(StartsWith("OS Name", 'win2012r2'),
'Windows 2012R2', IF(StartsWith("OS Name",
'sles-12'), 'SUSE Linux Enterprise Server
12'))))))"
```

8.   Save the Custom Field.
9.   Next select the Chart type report and then drag the elements that you see in the screen shot below to the Columns, Rows and Filters area. This should result in a pie chart.
10. Next click the gears icon and choose Chart Types…

and then select the Stacked Column chart type. Close the chooser and then slide the Data Level sliders all the way to the right. You should now have a chart that looks very similar to figure 3.

11. Since this is a chart that will go on a dashboard, you can also hide the title since it will already be listed in the dashboard by clicking [icon] and toggling the title bar.
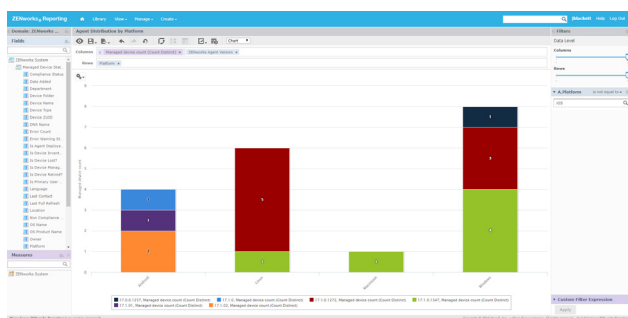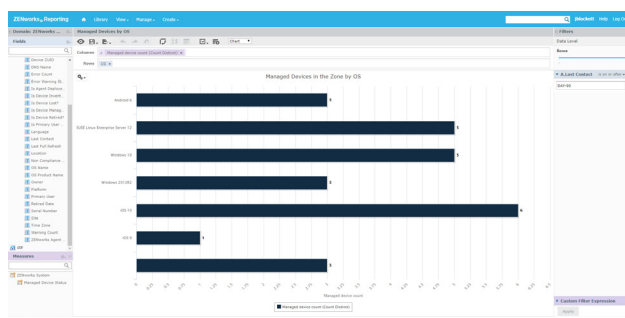
12. Now save this Adhoc View with the title that you want to appear on the Dashboard.

You have now built the second adhoc widget you need for your dashboard.

Building Dashlets with JasperStudio

The next dashlets that we need to build for our dashboard cannot be built with the Ad Hoc designer because they are not domain elements and because the types of elements we want to create are not available in Ad Hoc designer. Unlike Ad Hoc designer which uses the domain to generate data, JasperStudio can use either the domain or handcrafted SQL. In these examples we use handcrafted SQL.

% Devices Contacting Zone in Last 24 Hours

The first dashlet we want to create is a graphic indicator that shows the percentage of devices that are contacting the zone within at least the last 24 hours. We want to display it in such a way as to know when things are good, when they are concerning and when they are critical. These values could be different in your environment and you could adjust them appropriately.

Let's take a look at how to build out this dashlet.

1.   **Install and launch JasperStudio.**
2.   **Create a data adapter for the ZENworks Database.**
     a.   In the top right pane, right click Data Adapters and select Create data adapter.
     b.   From the Data Adapters list, select Database JDBC Connection.
     c.   In the Name field, enter *ZENworks Database*.
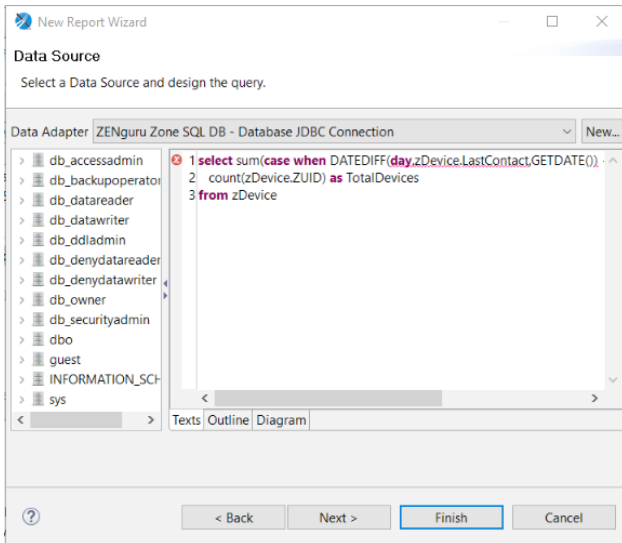   d.   In the JDBC Driver field, select the driver that

Figure 4: Data source and SQL statement

Figure 5: Setting the page format

ZENworks Reporting

corresponds to the type of database you are using.

e.   Update the JDBC Url field to reference you server and database names, similar to this:

j*dbc:tibcosoftware:sqlserver://mssql.activedir.zenguru. info:1433;databaseName=zenworks_ZENGURU*

f.   Enter your database username and password, then click Test. Assuming that the connection test is successful, click Finish and a new data adapter should be added. This allows JasperStudio to communicate with the ZENworks database.

3.   Create the report

a.   Select File > New > JasperReport

b.   From the Report Templates dialog, select All > Blank Letter, the click Next.

c.   Enter the name of the report you want to create, then click Next.

d.   From the Data Adapter drop-down, select the ZENworks Database adapter.

```
select sum(case when DATEDIFF(day,zDevice.
LastContact,GETDATE()) <=1 then 1 else 0
end) as CheckedInDevices, count(zDevice.
ZUID) as TotalDevices from zDevice
```

e.   In the Texts field enter the following SQL statement:

f.   You should now have a dialog that looks like the one in figure 4.

g.   Click Next.

h.   On the Group By Page, click Next.

i.   Click Finish.

4.   Customise the report.

a.   In the Outline pane, expand Fields and highlight CheckedInDevices.

b.   In the Properties pane change the Class value to *java.lang.* Double to cast the field as a double value instead of an Integer. Repeat this for the TotalDevices field.
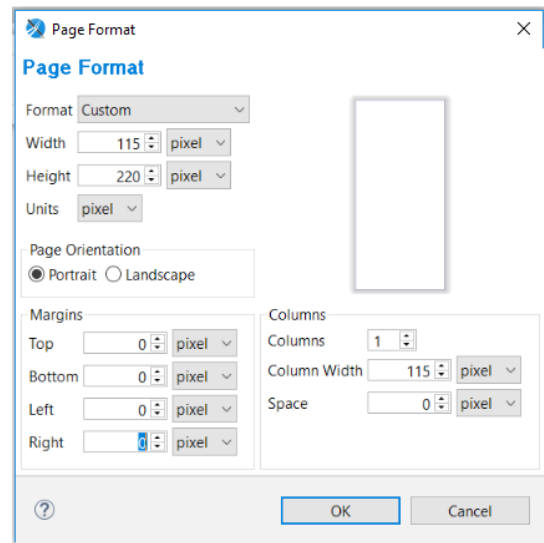
c.   Click on the Table and press the Delete key; then say Yes when prompted to remove everything.

d.   In the Outline pane, right click Title and select Delete. Repeat for Page Header, Column Header, Column Footer, Page Footer, Summary and Background.

e.   Right click Detail and click Add Band.

f.   Right click and select Page Format.

g.   Set the Page format as shown n figure 5:

h.   Click OK.

5.   Add and configure the Vertical Bullet widget to the Details pane.

a.   From the Palette, drag the Widgets Pro item to the Details pane.

b.   Select Vertical Bullet.

c.   Resize the image to fit the page with a room for a label underneath.

d.   Drag a Static Text element from the Palette to the free space below the Vertical Bullet you added and change the Text to "% Devices w/ Last Contact within 24 hrs"

e.   Right click the Vertical Bullet diagram and select Edit Widget Properties.

f.   Select the Widget Data tab.

g.   Select the Value and Target subtab.

h.   Enter   *($F{CheckedInDevices}/$F{TotalDevices})*100* as the Value expression.

i.   Enter 100 as the Target expression.

j.   Select the *Color Ranges* tab.

k.   Click Add.

l.   In the *Color chooser*, select green.

m.   In the Label Expression, enter "Normal", including the quotes.

n.   In the Min Value Expression field, enter 50.

ZENworks Reporting

o. In the Max Value Expression field, enter 100.

p. Click OK.

q. Click Add.

r. In the Color chooser, select yellow.

s. In the Label Expression, enter "*Warning*", including the quotes.

t. In the Min Value Expression field, enter 15.

u. In the Max Value Expression field, enter 49.99.

v. Click OK.

w. Click Add.

x. In the Colour chooser, select red.

y. In the Label Expression, enter "*Critical*", including the quotes.

z. In the Min Value Expression field, enter 14.99.

aa. In the Max Value Expression field, enter 0.

ab. Click OK.

ac. Click OK.

ad. In the Report Design pane click the Preview Subtab. Make sure no errors are returned. You will see a blank report since the JasperStudio cannot render the graph. This can only be done from the web browser.

6. **Import the report into the web server so that it can be used in the dashboard.**

a. Save the report and make a note of the location you saved it to.

b. Open the ZRS web page in a browser and login as a ZRS User.

c. Right-click the Organization > Reports folder.

d. Select Add Resources > JasperReport

e. In the Name field enter *Agent Contact Dashlet*

f. Click the Browse button to Upload a Local File.

g. Select your report file you created.

h. Click the Data Source button on the left.

i. Select Select data source from repository and browse and select the *ZENworks_Datasource.*

j. Click Submit.

k. Click on the Report you added to confirm that it runs and displays the Vertical Bullet as expected.

You have now completed building your JasperStudio widget. You can use JasperStudio to build a number of additional widgets including simple clickable text fields to radiate numbers as well as other information radiators such as gauges, thermometers, etc.

Putting it all together into a dashboard

The final step is to put this all together in a dashboard. To do this you use the ZENworks Reporting Dashboard Designer and drag the reports that you have created onto the canvas. To do this:

1. In ZENworks Reporting select Create Dashboard.

2. From the New Content pane drag a Text element into the canvas.

3. In the Text field, enter *Device Executive Dashboard,* then click OK.

4. Resize the element to the top ½ inch or so of the screen.

5. Right click the element and select the Scale to Fit option as Dashlet.

6. Click OK.

7. Now resize the dashlet to so there is no empty space at the end of it.

8. Now drag in each of the reports you created and arrange them on the canvas in the way you want to see them.

9. Click the Gear icon in the toolbar and enable Auto-refresh dashboard contents.

10. Click the Preview button (eye) in the dashboard to see what your dashboard will look like.

11. If everything works as expected then save the Dashboard.

12. Finally, you need to determine the URL of the dashboard that you would want to display on the big screen. To do this find the Dashboard in the Repository and click on it to open it in View mode.

13. Note the address in the bar, it should be something like : *https://<server>/jasperserver-pro/dashboard/ viewer.html #%2FArticleDash*

14. Modify the address to be *https://<server>/ jasperserver-pro/dashboard/viewer.html?decorate =no#%2FArticleDash.* This removes the ZENworks Reporting menu bars so that only the dashboard is shown.

15. If you visit this page and put the browser in Full Screen mode you are left with a dashboard that can be monitored on a big screen.

This article covered a relatively simple example of a dashboard that could be quickly built. ZENworks Reporting also provides the ability to provider interactivity and hyperlinking in the dashboard so that if you want a user to click in one dashlet and have other dashlets updated you can do that. Additionally, with JasperStudio you have complete flexibility in creating hyperlinks to other Jasper reports or even external content.

I encourage you if you haven't yet installed ZENworks Reporting to do so today, and then let your imagination run wild. If you have questions feel free to reach out to us at zen@microfocus.com and we'll be happy to provide some guidance.

Jason Blackett is the Product Line Manager for Endpoint Management at Micro Focus. He joined Novell over 20 years ago and has been involved with ZENworks in one way or another since it was first introduced.

Success Story: Agrarmarkt Austria

An early adopter of ZENworks® Configuration Management strengthens its partnership with Micro Focus®.

The main task of Agrarmarkt Austria (AMA) is the handling of assistance measures in agricultural policy. AMA Marketing Ges.m.b.H. (specific business division) is responsible for the definition and implementation of various quality assurance programs and to promote the sale of Austrian agricultural products. This includes meat and meat products, eggs and meat poultry, milk and milk products, fruit, vegetables and potatoes.

Challenge

AMA's IT organisation manages the roll-out of office suite applications, as well as Oracle and SAP modules, and custom-developed applications for AMA users.

As a long-time user of Novell solutions, when AMA realised years ago that distributing new software versions to its users was becoming a time-consuming task, Gerhard Dyduch, IT-Manager Infrastructure at AMA, naturally looked to Micro Focus (having acquired Novell) for a potential solution, as he explains:

"We had always been happy with our Novell solutions and the support we received. We'd heard good things about ZENworks Configuration Management, which had only just been introduced at the time, and we decided to evaluate and eventually implement it."

Solution

ZENworks Configuration Management (ZCM) automates IT management processes across the lifecycles of desktops, laptops, and mobile devices.

With the help of a specialist implementation partner, AMA was soon underway with ZENworks Configuration Management and has

never looked back; upgrading as new versions became available. Mr Dyduch likes the fact that ZENworks Configuration Management was able to adapt as AMA's IT environment and requirements increased:

"We run ZENworks Configuration Management on a VMware virtual server. ZENworks's flexibility enabled us to easily migrate to an Active Directory when that became relevant for us, without having to run this as a separate configuration management project."

Using ZENworks Configuration Management, AMA can offer controlled deployment of all its applications on either Windows 7 or Windows 10, depending on the specific user's current platform. This is very important because new application versions become available faster and faster. Mr Dyduch comments:

"Our users like the fact that they can use their familiar interface, which groups applications in a desktop

window, to easily download any new software versions to ensure they are always current and don't experience any downtime. Our IT staff can use ZENwork´s functions to quickly deploy new software versions to nearly 750 PCs across our organisation."

Results

Mr Dyduch is clear on the benefits:

"It would clearly not be practical for every user to install new software versions themselves, or for our IT staff to spend their time doing this on behalf of users. We estimate using ZENworks Configuration Management we can distribute new software versions five times faster than through a manual effort."

He concludes:

"ZCM is easy to work with and has a clear central administration console. Throughout our long partnership we have felt supported by Micro Focus and look forward to taking advantage of new functionality as it is introduced."

"ZENworks Configuration Management is easy to work with and has a clear administrative console."

Next Generation Archiving

Facebook, Twitter, LinkedIn & Co as an alternative to email?

Major changes in the form of corporate communication require future-oriented actions. Younger employees especially have high expectations and needs regarding the communication of their employers.

The way we communicate within a company has changed completely. This change becomes obvious when you think about how things used to be 10 years ago. Electronic email was by far the most innovative medium of communication.

Of course, email and classic letters still have a reason for existence but are increasingly replaced by modern real time communication media; social media platforms and enterprise social networks like Linkedin, Xing and Yammer.

The use of smartphones in companies and thus the increasing mobility of employees only enhance this development further. Younger employees enjoy these less complicated and direct methods of communication and are able to stay in contact with colleagues, customers or business partners any place at any time.

Companies profit from the trend as productivity grows, but at the same time using these modern ways of corporate communication may result in IT managers losing some control.

Communication beyond corporate IT

In the time when most electronic corporate communication was made via email, companies did just fine with a simple backup solution or mere email archiving. All email communication was secured and was retrievable by request. No matter whether the data was archived because of compliance or other specific requirements.

Nowadays, this matter is way more complicated, as internal and external

communication occur beyond corporate IT. Privately owned smartphones used for business matters and mobile messaging only make it worse. But how should IT managers react?

Shadow IT through communication ban

Arguably the easiest solution is a complete ban on external services for business communication. This way communication can be monitored completely by the company's IT department.

However, is this a modern solution? The ban would probably upset many employees – especially the younger ones. These *digital natives* are used to modern communication media from their personal surroundings.

A ban would probably lead to the development of shadow IT which is

something that companies clearly do not want. But what does the alternative look like, which satisfies both IT managers and makes employees more productive instead of upsetting them.

Archiving 2.0 has got it all

Companies need a solution that allows the use of modern communication media but monitors its use in detail at the same time. Companies nowadays need an archiving solution which does not only archive email but also mobile communications, social media and instant messaging services – Archiving 2.0.

IT managers who decide to deploy such an archiving solution cover the need for increased control in modern IT environments and demonstrate future-oriented working.

One of these Archiving 2.0 solutions is **Retain.** Retain provides unified archiving of all business communication, including email, Skype for Business, social media, and mobile communication data for case assessment, search, and eDiscovery. It can be deployed on-premise or in the cloud.

Find out more about Retain at
www.gwava.com/unified-archiving

Success Story: Høyer Finseth AS

After merging two companies, the newly formed Høyer Finseth used Micro Focus® Retain™ Email to migrate data from its GroupWise® system to Microsoft Exchange.

Overview

Høyer Finseth is a Norwegian company focusing on building, engineering, and consulting. The main office of the organization is located in Oslo. Besides this main office, the company has subsidiaries in Revetal, Råde, and Ålesund. With a high level of technical expertise, Høyer Finseth is able to assist customers during the complete building process. In December 2016 Høyer Finseth was purchased by WSP Global Inc, an international engineering consultancy, but continues to operate independently.

Challenge

In 2012 the two companies A.L. Høyer AS and Finseth Rådgivende Ingeniører AS merged and became Høyer Finseth AS. The merger increased the competitiveness of the organisation, but it also resulted in some challenges regarding the IT Infrastructure of the company.

Since one of the original companies was using Micro Focus GroupWise and the other one Microsoft Exchange, it was the goal to unify the two mail servers. The company decided to use Microsoft Exchange 2010 as the company-wide mail server platform.

Solution

With the help of **Retain Email**, Høyer Finseth was able to move GroupWise data into the new common Exchange system as well as archiving the old Exchange data at the same time. The company archived all data initially and then only migrated parts of data depending on its age and the size.

This procedure enabled the company to reduce the amount of data in the live mailbox store drastically and to start with a clean Exchange 2010 system. Since the organisation had no archiving solution in place before the migration, this issue could be solved, too. The archiving capabilities of Retain Email include comprehensive eDiscovery tools and technologies such as deduplication, which reduces the storage costs for the organization.

Since Høyer Finseth wanted the risk of user downtimes as small as possible, it was important for the organisation to test the migration. Patrick Frontéri, Senior Consultant at Frontéri Network Consulting, was in charge of planning, installing, configuring, archiving, and testing the migration process. When handling problems, Frontéri was directly supported by the Micro Focus support and development team.

Results

Terje Gunnarsen, responsible for the IT at Høyer Finseth, explains

"The GWAVA (now part of Micro Focus) team put a lot of effort into solving our problems."

Some initial problems occurred due to the initial situation of having two different platforms. This complicated the migration of address books and shared folders.

After testing the migration several times and solving these remaining issues, the migration itself only took one single weekend. Even though Gunnarsen and his IT department were confronted with some smaller challenges during the migration process, he was very satisfied with the result:

"Retain helped us to merge two mail systems and now functions as an archiving solution, which enables us to control the size of our Exchange system."

Today, Retain Email is archiving all communication in Exchange, including public folders. So we can be sure to have records of all of our electronic communication with our partners and customers. This is very important to us as we conduct hundreds of projects each year.

Retain Email is integrated with the Outlook client and the Outlook Web Access, which enables all users to quickly open their archives. Gunnarsen explains.

"The good thing about Retain Email is that if users don't find what they are looking for in Outlook, they can easily search for it in Retain—no matter if it originally was data from A.L. Høyer AS or Finseth Rådgivende Ingeniører AS"

> "Retain helped us to merge two mail systems and now functions as an archiving solution"
>
> Terje Gunnarsen
> IT Director
> Høyer Finseth

SERAS – A REST API For Directory Access

by Horst Fuhrmann and Alex Belousov

NetIQ eDirectory previously owned by Novell, also known as Novell Directory Services (NDS) and sometimes referred to as NetWare Directory Services was initially released by Novell in 1993 for Netware 4. eDirectory is a full-service, secure LDAP directory providing scalability and an agile platform to run an organization's identity infrastructure and services. It is an X.500-compatible directory service and can be accessed via the following interfaces:

- NDAP (Novell Directory Access Protocol)
- LDAP (Lightweight Directory Access Protocol)
- DSML (Directory Services Markup Language)
- SOAP (Simple Object Access Protocol)
- ODBC (Open Database Connectivity)
- JDBC (Java Database Connectivity)
- JNDI (Java Naming and Directory Interface)
- ADSI (Active Directory Service Interface).

This is quite a number of different interfaces and hence fully covers *traditional* client needs, but it does not help much in today's mobile world. Most new devices like Apple, Android and Chrome phones and tablets are designed for use with http/https protocols and nothing else.

How mobile devices and web application access data - The Rise of the REST API

Since these new mobile devices were solely designed for http/https protocols many people were searching for methods that allow to merry the 2 universes of business applications and consumer devices. As it turns out the solution for this problem is the REST (Representational State Transfer) protocol.

REST is nothing new, it is based on pretty old scientific work, which describes some basic principles. Representational State Transfer or REST is an architectural style that sets certain constraints for designing and building large-scale distributed hypermedia systems. As an architectural style, Representational State Transfer has very broad application. The designs of both HTTP 1.1 and also URIs follow RESTful principles.

The Birth of REST: Roy Fielding's Dissertation

In 2000, Roy Fielding and his colleagues had one objective: create a standard so that any server could talk to any other server in the world. In his doctoral dissertation[1] he came up with the Representational State Transfer (REST).

1.   Roy Thomas Fielding, 2000: PhD dissertation, Chapter 5
     Representational State Transfer (REST)
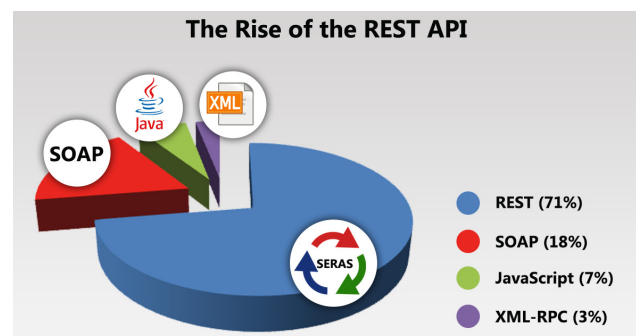   www.ics.uci.edu/~fielding/pubs/dissertation/rest_arch_style.htm

Figure 1: REST APIs are predominant today

Roy Fielding wrote: "I had comments from well over 500 developers, many of whom were distinguished engineers with decades of experience, and I had to explain everything from the most abstract notions of Web interaction to the finest details of HTTP syntax. That process honed my model down to a core set of principles, properties, and constraints that are now called REST.

- Uniform interface.
- This means we always use HTTP verbs (GET, PUT, POST, DELETE).
- We always use URIs as our resources.
- We always get an HTTP response with a status and a body.
- Stateless - this means each request is self-descriptive, and has enough context for the server to process that message.
- Client-server - there has to be clear boundaries between roles of the two systems. One server, operationally, has to function as the server that is being called and the other has to function as the one making the   requests.
- Cacheable - unless denoted, a client can cache any representation.

This is possible thanks to the statelessness—every representation is self-descriptive."

REST is an architecture for distributed applications using WEB technologies. The World Wide Web is no doubt the largest and best known REST application. Many other web services also follow the REST architectural style.
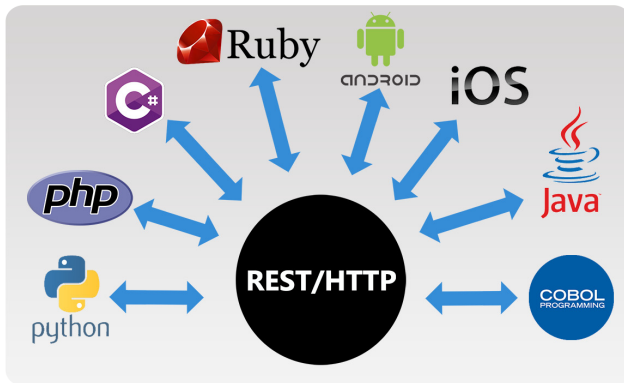
*Figure 2: REST is a central feature of the WWW*

What are the advantages of a REST API

The main advantages of REST web services are:

1. Lightweight - the requests and responses can be short.
2. Human Readable Results - flexible & simple, URIs for identification.
3. Easy to build - No toolkits required.
4. Totally stateless operations - stateless CRUD (Create, Read, Update, and Delete) operations.
5. Caching situations - information can be cached because of the totally stateless operation.
6. Many vendors are developing their own APIs based on the REST specification.

Google, Linkedin, Twitter, Amazon, Facebook, Oracle, Microsoft are just a few names of the big players in this area.

Microsoft uses the Graph API for managing the Azure and Office 365 Cloud. Other big players like Cisco, HP, Dell include RESTful API services on their own hardware for support purposes. Even MARVEL have created a REST API for their own comic characters.
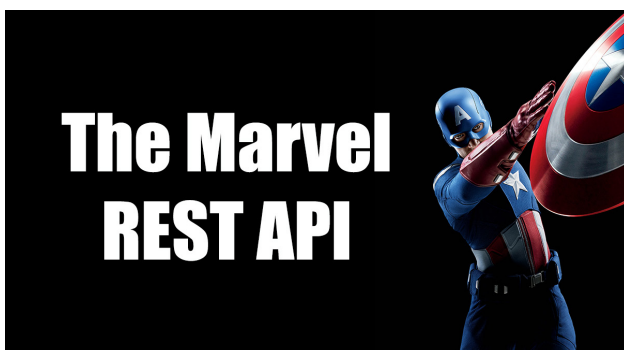
The SKyPRO Enhanced REST API Service (SERAS) - SKyPRO's REST to LDAP Gateway

SKyPRO started to develop an interface for accessing eDirectory data, because one of our customers wanted to synchronise an external application (3rd Party) with existing eDirectory data. We were looking for simple ways that would allow our customer to access this data over a highly secure channel. We were also looking for ways to have a generic access that could easily be adapted to any future requests or possible change request.

Hence, SERAS was based on REST and implemented in way that would allow to easily reconfigure it for most customer requests and applications. It was also clearly geared for agile development and microservices. The microservice architecture enables continuous delivery and deployment of large and complex applications.

- SERAS make it easy to develop and expose REST APIs for any LDAP based data serve.
- SERAS were originally built as a highly resilient and scalable cluster-aware system.
- RESTful APIs that can be readily accessed by any development language without requiring any driver software to be installed.

All modern languages and even legacy languages such as COBOL and Fortran support HTTP/HTTPS and hence REST out of the box.
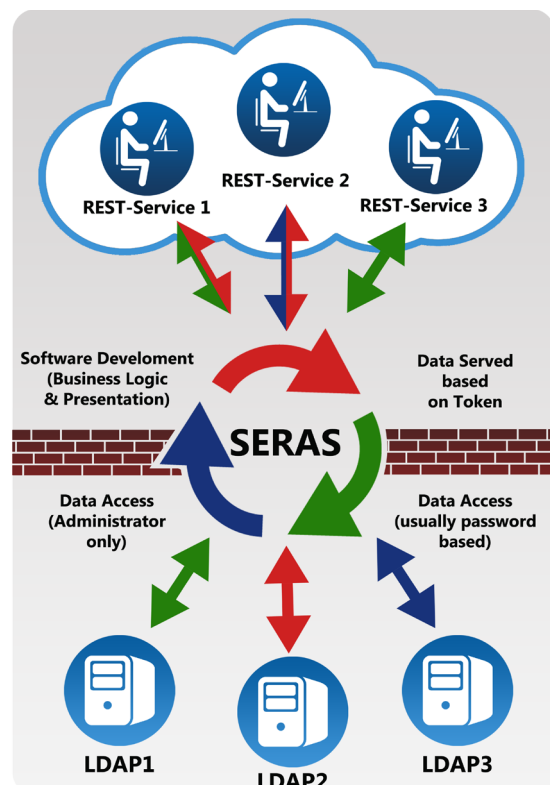

Figure 3: SERAS architecture

Directory Access

About a month ago Alex received a request from within the company that they need an iPhone application for accessing user information from their internal Enterprise Directory Server (LDAP/eDirectory). He started to look for applications that are currently available on the market that could be used as a REST gateway. He reviewed a number of applications but has selected SERAS (SkyPRO Enhanced REST API Services).

Alex has worked closely for a few years with SKyPRO and has a good knowledge of our product line. SKyPRO's Enhanced REST API Services have an exceptional architecture and number of unique functions that distinguishes them from similar products.

- On top of standard ACL mechanisms, SERAS added a number of extra unique security layers.
- One SERAS instance can serve an unlimited number of LDAP data sources at the same time.
- Different applications can use dedicated profiles with their own, application specific settings and parameters.
- SERAS has a native Elasticsearch integration.
- The highlight of SERAS is the ability to query and result documents through input/output transformation scripts (something similar to IDM Input/Output Transformation Policy).
- Additional transformation Javascript functions can be added to the functional libraries.

SERAS: A closer look

Let's start and configure SERAS

1. Start from command line start. **sh / start.cmd file.** (figure 4)
2. Connect to the Service via *http://localhost:8182*. You will see an initial web page that will look as shown in figure 5.
3. The service configuration page may look like figure 6 (over page).
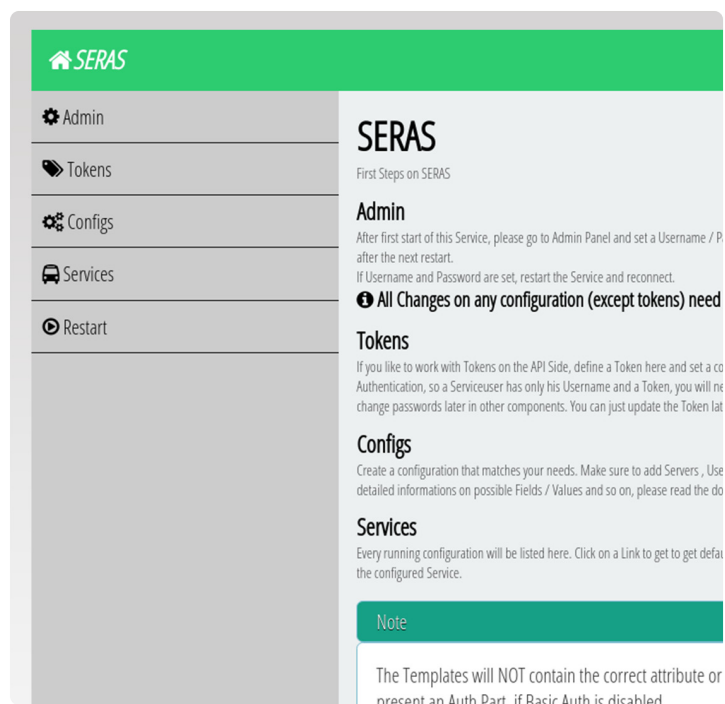

Figure 4: SERAS command line start

Figure 5: Screenshot of initial SERAS web page

4. A few important parameters to consider for configuration
a. Start by using the preconfigured tokens instead of any passwords.
b. If checked, the server will accept tokens, and lookup matching tokens in his List.
c. Replace a token at runtime with a password.
5. Allow Loose Rights.
. Do we allow Loose Rights? This means we don't need to add Attributes to the Config.
. We allow all Attributes for Search / Retrieve and Modify
6. InputScript - JS Script to apply to input documents
7. OutputScript - JS Script to apply to output documents

A Real life example

In our scenario, an iPad web application has to query user information based on known NT-logon information. This is a trivial task for any traditional LDAP client but it is an almost impossible objective for a regular mobile device. The task becomes even more complicated, because the application (for its own strange reasons) has its AD account information in a very strange and unusual format.

The application is unable to correctly handle the backslash character (\) and it is replaced with the hyphen (-). As a result, instead of receiving the account information in a format like *domain\samaccountname* it has the information in format *domain-*
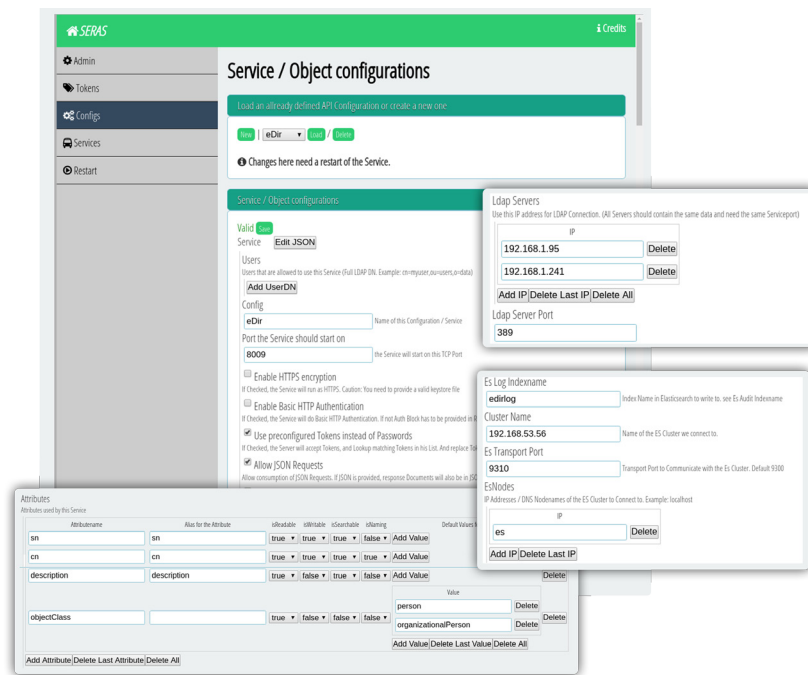
Directory Access

Figure 6: SERAS service configuration

Figure 7 demonstrates, in screenshots and logs from NetIQ Validator and iMonitor LDAP traces, a simulation of the application's behaviour. It shows that the application successfully received the required information. They show that the real LDAP query has the NT-Logon information in the correct format and it found the requested objects in the LDAP storage.

As a result we conclude that SERAS allows us to get the required results without any application code modification.

SERAS is a flexible tool and will give you simple ways to achieve your desired goals without huge investment and the rebuilding of your existing applications.

Horst Fuhrmann is CEO of SKyPRO, the Swiss based company he founded in 1987, focused on developing communications and IDM solutions. Horst's background is in mechanical engineering and physics.
Alex Belousov is originally from Belarus, but now lives in Toronto, Canada. He's worked with Novell technology since the days of NW3.11. Since 2004 he's been immersed in the exciting IDM world, latterly as an Enterprise Directory Planner.
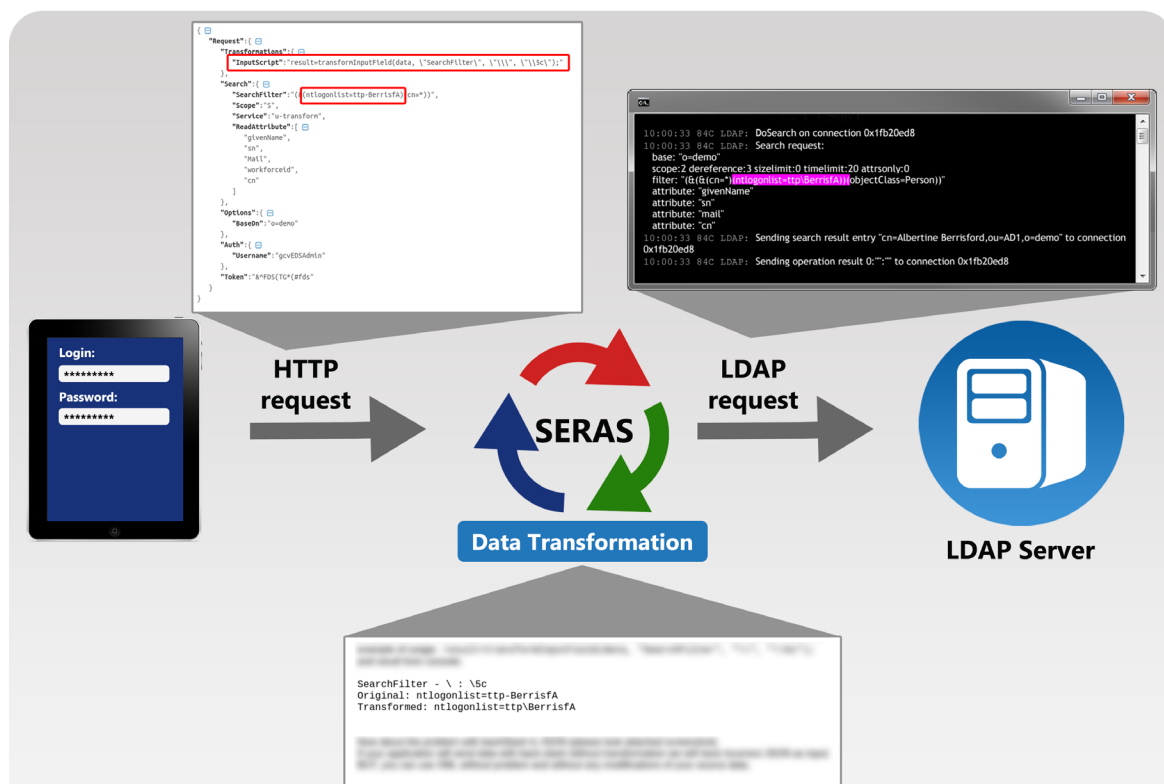
samaccountname. The LDAP server has the NT-Logon information available in the correct format .

Making the appropriate data format changes usually requires necessary adaptations on the application side (that potentially can have negative impact on other parts of the application). Changing the application code, in order to accommodate these changes is not always acceptable, especially when this is a purchased third-party application.

SERAS has the ability to execute real-time data transformation and has become a lifesaver in this situation.

Figure 7: SERAS in action - logs from NetIQ Validator and iMonitor

Vibe At The University Hospital Of Munich

Vibe delivers effective and secure team collaboration with full mobile support for ease of use.

The University Hospital of Munich (LMU), Germany, is a centre of high-end medicine, medical innovation and research, providing the best possible treatment to patients. With more than 2.000 beds and 10,000 staff LMU is a highly advanced hospital with 45 clinics, institutes and departments covering all fields of medicine. With its two campuses in Grosshadern and in the city centre, it is one of the largest hospitals in Europe. Employees of the Medical Centre represent 90 countries while Hospital and Medical Faculty programmes support patient care and research projects in several countries around the world.

The Department of Medical Technology and IT (MIT) is responsible for supporting the IT infrastructure. Safeguarding the infrastructure operation, as well as information processing for healthcare, research, and teaching purposes, reflects its core business.

Challenge

As patient data is held by the MIT department, security and data protection are extremely important. However, in an increasingly globalised world, it is vital that medical professionals can freely communicate and collaborate with other medical institutions in Germany, or elsewhere in the world. Since this type of collaboration often involved the exchange of data, it created compliance and privacy issues because security could be potentially compromised.

Jürgen Primbs, Project Manager for the hospital, explains the dilemma:

"We used SharePoint for our intranet, but this didn't provide the opportunity to securely collaborate with external audiences. We were relying on a system of just telling people what they could and could not share.

"Patient data could obviously not be shared but working documents

in a team environment could. We decided we needed more structure to allow for much better team collaboration."

Solution

Micro Focus® Vibe was used elsewhere in the University Hospital and was recommended to Mr. Primbs by a colleague who had evaluated other collaboration solutions. Vibe is

designed to bring people, projects, and processes together in one secure place to enhance team productivity. Within two months, the MIT team was live with Vibe. Mr. Primbs notes:

"It was crucial for us that we could use Vibe out-of-the-box and that it would give us the platform support, in particular mobile, that we required. We liked that we didn't need any programming knowledge and the set-up was a simple click-and-go process. Following implementation we were operational straightaway and Vibe soon became a key part of life for us."

> "It is almost impossible now to imagine life without Vibe."
>
> Jürgen Primbs,
> Project Manager

> "...before we know it, Vibe is used for blogs, wikis, and discussion forums, all promoting more effective team collaboration."

Local implementation partner **Code and Concept** trained the IT team on making the most optimum use of Vibe; implementing workflows and complex use cases, and providing Vibe project management workshops. Code and Concept also ensures Vibe remains current and is maintained in the context of the entire IT infrastructure.

Vibe's 1,200 users particularly like its mobile capabilities, with a lightweight, secure, and easy-to-use mobile user interface that presents a specialised view of Vibe workspaces. It includes a starting home page with quick links to the most commonly used features, such as workspaces, favourites, micro-blogs, and teams. Mr Primbs says:

"It is interesting to watch the Vibe user adoption. Typically, at the start of a project, the team will use Vibe to share working documents. Soon they start to realize the potential,

and before we know it, Vibe is used for blogs, wikis, and discussion forums, all promoting more effective team collaboration."

Data and documents are ubiquitously available so if employees attend a conference, there is no need to bring a USB stick. The data can be accessed from anywhere using a standard web data connection, regardless of location. This prevents version control issues and makes for a much more productive working environment, as Mr Primbs comments:

"If any questions come up during a presentation, I just access my work files and deal with them directly."

Occasional Vibe users like the clarity and simplicity of the landing pages, making it easy to create management reports. Landing pages are designed so that internal teams and communities can have

a one-stop place to communicate within teams.

Results

Vibe has not been introduced just as a communication and collaboration platform, but it is also used for hospital project management. The global project office manages over 60 projects led by different teams throughout the university group. Everything is captured in Vibe to ensure practical support.

Mr Primbs concludes:

"It is almost impossible now to imagine life without Vibe and Code and Concept to support us. We have strict workflow processes which ensures no patient data is shared externally and we have seen the use of Vibe increase dramatically over the last four years.

From a tool which was mainly used to share work documents, we have evolved to creating a much more productive user community who have embraced all that Vibe has to offer to improve collaboration."

code and concept
Christian Giese, the Code and Concept c o n s u l t a n t who worked on the project comments: "Every Micro Focus Vibe installation has a focus on a certain set of Vibe's facets. In the case of the University Hospital of Munich (LMU), the most important facets were information security and ubiquitous access to information, a combination that is, by definition, diametrically opposed.

"This objective needed the correct combination of several measures. First, Vibe was configured in the right way to keep all information secure - especially person-related data - leveraging methods such as layered access control, restrictive templates and strict

administrative processes.

"Features used were of course the Form and View designers, custom Vibe access roles, the administrative access control settings, role conditions, and the template configurator.

"The next stage in the configuration process was focused on giving users easy access to the information they are allowed to see. The "*hiding of forbidden information*" is built transparently into Micro Focus Vibe. The solution here aims not just at enabling retrieval, but of course **finding** the information first. To give users an easy way of accessing the data, a set of landing pages was created together with an index, providing navigation to any and all information without

compromising security. The extremely fast and powerful search of Vibe does the rest.

"To fulfil data protection requirements, the systems that Vibe runs on must be in different security and hardware domains and must be split network wise. Vibe's Tomcat is a standalone install, but the database, the indexers, the attachment storage as well as the access path for the user all are routed through different networks and are stored and running in different hardware zones.

"Code and Concept often build solutions like this for its customers. A very large percentage of Code and Concept's projects do not need custom code at all; current needs are factored in dynamically."

GDPR: Key Principles And Initial Actions.

by John Ellis

25 May 2018 is the date when all organisations are expected to be compliant with the new General Data Protection Regulation (GDPR). The key features of the regulation were outlined in a previous article (*OHM33, 2016/2, p24-27)* while in this article the key principles of data protection will be discussed along with the role of the data protection officer, tasks that should be undertaken to achieve compliance and the key aim of 'privacy by design'.

The GDPR is fundamentally about protecting information specific to living individuals, (deceased people do not have the same rights!) especially sensitive data such as health records, and information such as trade union membership. IT administrators should also remember that userids, email addresses and even IP addresses count as personally identifiable information.

This means that even application log files (e.g. GroupWise and Vibe logs) which contain this sort of information are also on the GDPR radar. Administrators need to have clear policies on what is logged and the storage of such files. This should be made clear to users when they first start using the application.

In one sense the law is asking organisations to look after people's data in the way they would like their own data managed. The GDPR has the power to enforce compliance through the mechanism of fines (greatly increased compared to existing laws) but individuals can also take their own legal action if they have suffered as a result of a data breach or mis-use of personal information. Although the financial penalties may be serious (up to €20M or 4% of turnover) and damaging for some offenders the objective of the law is to instil new accountability for personal data in organisations; to promote good practice in data management and to design privacy into services. (ICO (UK) blog August 2017).

The regulation defines Data Subjects, Data Controllers and Data Processors. **Data Subjects** are the individuals who are providing the source data. As such they have the right of consent to provide the information and the right to withdraw consent at any time. They may make "Subject Access Requests" to organisations to see what data is being held on them. Organisations can no longer charge for this and must respond within 30 days (formerly 40 days). The only way for an organisation to avoid disclosure is to argue that the request is too costly and impractical. To use this argument then the organisation needs to be able to show that it is already compliant with the GDPR.

Data Controllers are the entities (usually an organisation as a whole rather than an individual) who are responsible for managing the information collected and using it for various tasks e.g. product sales related activities. Controllers may delegate or sub-contract some of the activities to **Data Processors** who may be responsible for initially collecting the data, analysing it or just storing it.

Immediately you can see that cloud services are most likely to be data processors for many Controllers. It is the responsibility of the controller to ensure that the processor is compliant with GDPR and this needs to be clarified in their contract of work. Processors have to demonstrate compliance and alert all data breaches without 'undue delay' to the Controller.

The reach of the GDPR is global. It does not matter where the controller or processor are located. If they are dealing with the personal information of EU citizens (and yes, also the UK) then they still need to be GDPR compliant and are liable to penalties. The GDPR specifies how data should be managed when transferred outside of the EU. Only a few countries e.g. Canada, New Zealand, Uruguay and Israel are considered to have comparable safeguards to the GDPR. Data transfers to the United States are governed by the 'Privacy Shield' agreement.

The GDPR is a major piece of legislation and leads the way in privacy controls. Consequently there are still parts of it that have yet to be fully 'tested'. For example, the term 'undue delay' has yet to be quantified (but is likely to be less than 72hours, the specified maximum delay for notifications of data breaches). Also there are no official certifications yet available - although information security management accreditations such as ISO27001 help demonstrate a commitment to compliance – certainly in larger organisations.

Six principles

The accountability sought by the law is achieved by adherence to the six core principles outlined in it. These confirm that the personal information held by organisations should be:

1. **Legal, transparent and fair.** This is the core principle in a way. Personal data processing must be fair to the extent that it is what the data subject has consented to and transparent in that the processing matches what the subject has been told. Legal means in-line with the purposes of the GDP Regulation. So for example if you purchase something with a maintenance contract then you will expect the vendor to keep your name and address. This does not give the vendor the right to use your data to offer further unrelated products and services (perhaps from an affiliated company) which was not obvious during the initial transaction.

2. **Limited in purpose.** You must define at the start what the data you collect (as a Controller) will be used for and limit the processing just to meet that purpose. The data subject must be provided with the appropriate privacy notices and consent forms which clearly state the purpose.

3. **Minimised.** Controllers should only hold the information relevant to the purpose they are processing the information. Generic data collection forms should not be used, but should be specific to the need.

4. **Accurate.** The regulation requires that any personal data kept is accurate and kept up to date. The data subject has the right to rectify any incorrect or incomplete data. This means that the data controller needs a mechanism by which the subject can request changes. A web link is one option but it still requires the relevant procedures to be put in place. Accuracy is also 'of a time'. For example an initial medical diagnosis may be incorrect, but the information should be kept as it provides a full record of the patient's treatment. This principle also leads to the right of deletion of incorrect data (the so-called *'right to be forgotten'*).

5. **Limited storage.** If you don't need the data then delete it, is the message of this principle – a data retention policy is required.

6. **Confidential and integrity maintained.** Article 5, clause 1, states that Organisations must process data "that ensures appropriate security of the personal data, including protection against unauthorised or unlawful processing and against accidental loss, destruction or damage". Procedures and processes that limit access to only the staff who need to access the data need to be put in place. Organisations should also consider the use of encryption as a defence mechanism.

The EU GDPR will help protect the privacy of individuals and give regulatory authorities greater powers to take action against businesses that breach the new law.

The Regulation also applies to non-EU companies that process personal data of individuals in the EU.

The international transfer of data will be governed by the rules of the EU GDPR.

GDPR has global implications.   © *IT Governance, UK*

Data Protection Officers

The principles outlined above will in one way or another already be familiar to most organisations who comply with existing data protection laws. Public organisations such as councils (local government) and most large companies will already have appointed a Data Protection Officer (DPO) to oversee compliance with privacy and data protection laws. The GDPR believes this is good practice and recommends that all organisations appoint one. It does not have to be a full-time role – a senior member of a small company may take on the responsibility – and a DPO can even be a contract member of staff (part-time or full time).

DPOs need to be granted a high level of independence in order to perform their roles, and have a good understanding of the relevant laws (although a legal background is not essential). They take the responsibility of ensuring that all the necessary procedures, processes and checks are put in place and maintained in order to achieve compliance.

Data protection should be a board level responsibility and constantly reviewed and so the DPO needs to have good channels of communication directly to the board. One method that boards can adopt to manage their responsibilities for data protection is to appoint a "senior information risk owner" to the board. This is a business risk management role and should lead to a holistic approach to data management.

> **Every organisation needs someone to oversee data protection and compliance with the GDPR**

GDPR

Data Protection Impact Assessments (DPIAs)

Fines, law suits for compensation claims and loss of reputation are the outcomes of not complying with the GDPR. Consequently it makes sense that organisations seek to recognise and reduce their risks, and the GDPR mandates that organisations should undertake DPIAs to demonstrate compliance. Controllers and processors need to evaluate the risks inherent in their business activities and implement measures to mitigate those risks.   Risks include accidental destruction, loss or unauthorised disclosure which cause physical, material or non-material damage.

The GDPR sets out what a DPIA must contain:
* a description of the processing and purposes
* legitimate interests pursued by the controller
* an assessment of the necessity and proportionality of the processing
* an assessment of the risks to the rights and freedoms of data subjects
* the measures envisaged to address the risks
* safeguards and security measures to demonstrate compliance
* an indication of timeframes if processing relates to erasure
* an indication of any data protection by design and default measures
* a list of recipients of personal data
* confirmation of compliance with approved codes of conduct
* details of whether data subjects have been consulted

This is a serious and critical work commitment which may be new to many organisations. One of the first steps needs to be to recognise the flow of personal information throughout the business, which leads to the process of data mapping.

Data Mapping

Data mapping brings into focus the who, what, why, when and where of an organisation's data - the 5 W's. Basically it's an investigative exercise in finding the sources of your data and how it's stored, managed and distributed within the organisation. More often than not the information is obtained by discussion or questionnaire with departmental stakeholders. The result of the exercise may be a detailed diagram of data flows or in more tabular form.

There are four elements in data mapping; the **data items** that are the core information; the **format** which is the state in which the data is stored, for example in the cloud, but you must also identify paper based formats, backups,
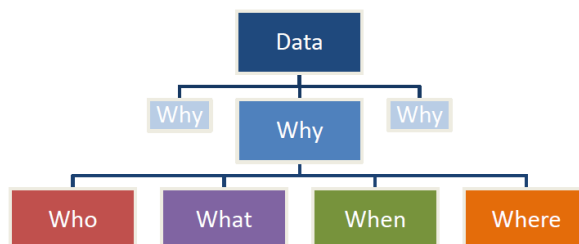
The 5 W's of data mapping

even usb storage. The third element is **transfer** – the methods by which data items move from one location to another (they generally do), either physically or across the network. This includes faxing – which creates a new data item at the recipient end. Finally **location** – the site where the data items are processed (including stored).

The data map should also include how the data is collected - web form, call centre, email etc – and who is accountable for the data. All data should have an owner (as IT administrators well know). It's important to know who should have access to the data and how, or if, it can be shared.

For large organisations data maps can become highly complex. So it makes sense to start with a 'high level' view and then dig down into smaller areas in greater detail. Creating data maps will clearly indicate where issues and risks associated with the processing of personal data arise. Consequently mitigations should be put in place to minimise the risk of a data breach.

Data maps are a key input to the impact assessments mentioned earlier. Together they help to embed the ideas of privacy by design in project and business operations. This is one of the key objectives that the GDPR wishes to achieve.

Impact assessments and data mapping are two of the processes that lead to GDPR compliance along with a management framework (documentation and processes). Effective staff education is also required to create the new culture and responsible attitudes to data handling. While all the requirements of the GDPR appear onerous to all organisations there are definite business benefits once the nirvana of compliance has been reached.

Ref: EU General Data protection Regulation – an implementation and compliance guide, by the IT Governance Privacy Team. ISBN 978-1-84928-835-4, published by IT Governance Publishing, 2016.

John Ellis has worked in the IS/IT sector for over 30 years, specialising in messaging systems and related technologies. He is a member of the OH Management team and the publishing editor of OH Magazine.

Ask The Experts: Micro Focus Vibe and Filr

by Robin Redgrave

Welcome to this edition of questions and answers for Micro Focus Vibe and Filr. If you wish to ask me any questions then please email them to qanda@open-horizons.net.

Q: **Whenever the file synchronisation is running on our Filr system our user's performance is impacted. We have tried running it out of hours but as we have a large number of file servers with many millions of files but it takes too long to run and over runs into working hours. Is there a way to run a sync with it impacting less on the users?**

A: Hopefully you are running Filr in a large clustered environment. Generally, unless it is for a proof of concept, I never install a single server, or even a large environment. It is only a little bit of extra work but a clustered environment ensures that the system can scale and is more flexible.

What you need to do is disable synchronisation on each of the nodes that your users are connecting to then add an additional node for which you enable synchronisation and ensure that users do not connect to it.

The synchronisation options can be set per node in the appliance administration portal. On the Configuration menu select the Net folders menu option (see figure 1). By default, this is enabled for a new node.

On the node that you leave synchronisation enabled, consider increasing the simultaneous syncs and the number of threads per sync as this will not impact your Filr users as they will not be connecting to that node.

Q: **Now that client-side Java is being blocked by many browsers and is being deprecated, the edit in place options are not working from within Vibe. Is there any way to get these to work?**

A: This is frustrating, especially if you are used to that way of working. However, this problem should be properly resolved when 4.0.4 is released, but if you are running 4.0.3-P1 you can try out the new functionality with a hidden switch.

Edit the sff-ext.properties file in the …./apache-tomcat/webapps/ssf/WEB-INF/classes/config directory. And add the following lines:

```
edit.in.place.for.ie=msuri
edit.in.place.for.nonie=msuri
edit.in.place.file.msuri.extensions=.doc,.ppt,
    .xls,.docx,.pptx,.xlsx,.docm,.pptm,.xlsm,.txt,.rtf
```
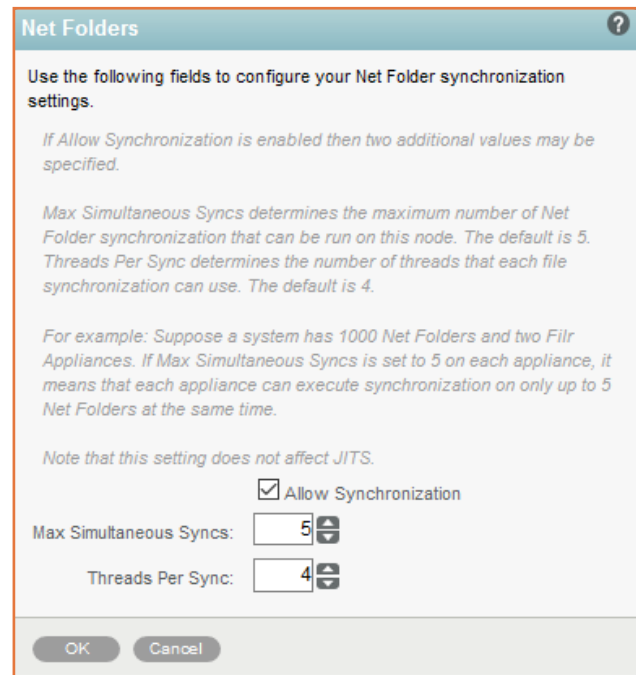

Figure 1: Setting synchronisation options

Restart Vibe (/etc/init.d/teaming restart) so that the updated properties file is read, and then test it. At the moment it does not look as if it is working with the office add in, and will not work with Open Office/Libre Office.

Q: **We have been running a large Vibe environment with several thousand users, for many years. However, our database server is beginning to get low on space as the database is getting larger. If I look directly at the sitescape database one of the largest tables is called SS_ChangeLogs which appears to have information going back many years. What is this table and can I delete the older entries?**

A: This table holds the logs for every change made to any entry. So, for example, if you create a file, edit a form or mark a task complete, this is all logged in this table. However, I would not recommend just deleting these entries, as there is a way to do it from within Vibe.

In later versions there is an option in the Administration Console for *Database Logs and File Archiving* (see figure 2, over page). The top option allows you to specify a time period to keep these entries. By default this is not set but you can set it to a time period that suits you. If you decide to set a limit to keep these entries, bear in mind any
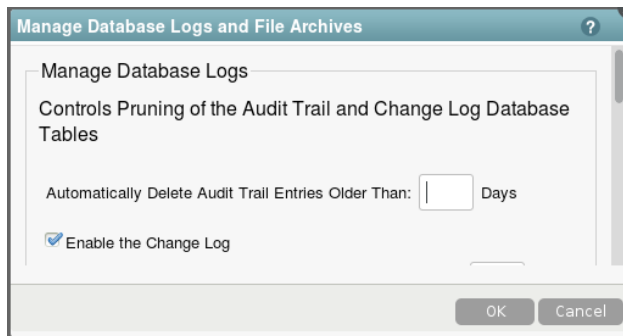
Filr & Vibe

Figure 2: Changing the auto delete on the audit trail

regulations that may apply to your industry on how long this audit information should be kept.

Filr has a similar option, though by default that is set for 183 days (6 months).

Q: I was looking at my Vibe server with the aim of reducing disk space, and I noticed that there is a large directory called *archivestore* that contains many old files. What is this directory and can I delete it to regain space on the disk?

A: Believe it or not when you delete, and purge, a file in Vibe, by default the latest version of the file is stored

in the *archivestore* directory, so if need be you can restore it. In a previous Open Horizons article I explained how to find and restore these files.

If you wish these files can be deleted. However, in more recent versions of Vibe there is an option in the Administration Console to disable archiving of deleted files.

Select the option from the left-hand menu for *Database Logs and File Archiving* (see figure 3). Scroll to the base of the page and there is an option to enable/disable archiving of deleted files.
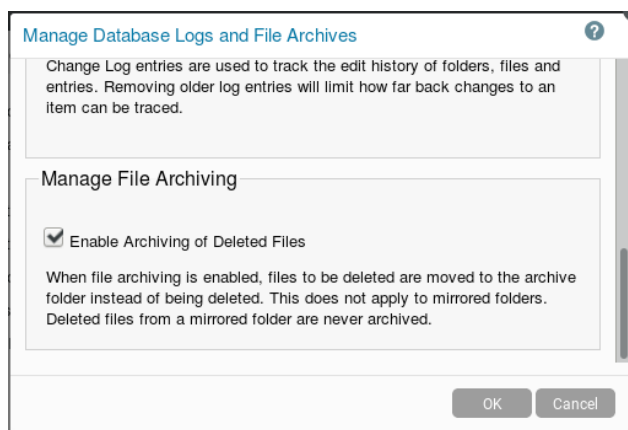
Figure 3: Enabling archiving

Robin Redgrave is a Solutions consultant based in the UK and has been working with collaboration products for almost 30 years. He joined WordPerfect in 1987, transferred to Novell with the merger in 1994, and is now with Micro Focus. He is a regular speaker at the Open Horizons Summit and many other events.

Ask The Experts: GroupWise

by Rob van Kooten and Jan-Arie Snijders

Q: I do not want to use the eDirectory admin user for the MTA user synchronisation via LDAP in GroupWise. What rights does the user account need?

A: You can create a new user in eDirectory that can be used in GroupWise, and this user needs Compare and Read to All Attribute Rights on the user objects that it needs to synchronise. This you can set in iManager on the containers holding the user that must be synchronised, here you assign the *Compare* and *Read* to *All Attribute Rights* for the user the MTA uses, as shown in figure 1.

Q: Can i setup my GMS in a way the users only use their email address to setup the device?

A: Yes - with autodiscovery. This means the device will use the host portion of the email address to find the GMS server based on DNS records. The configuration is all done on your DNS server.

As it will only function over SSL you must meet some criteria :

• A valid (and trusted) SSL certificate must be available on the GMS server

• The mobile device must be able to follow the certificate chain to the root CA certificate

• The GMS servers must have a wildcard certificate or an SSL certificate with Subject Alternative Names (SANs) as a single certificate must be valid for all GMS servers.
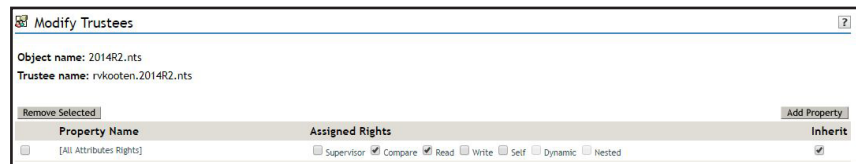
Figure 1: Setting rights in iManager for the LDAP sync account

When the above is in place you can setup the DNS records needed for the autodiscovery to work

1. CNAME for autodiscover. Create a CNAME record with the alias autodiscover for the GMS server. alias: *autodiscover.company.com* cname: gms.company.com

2. SRV record for autodiscover. The service record for autodiscover will provide the connection info to the device

    service: _autodiscover
    protocol: _tcp
    port: 443
    target: *gms.company.com*

    When done the the SRV record for autodiscover should be like this *_autodiscover._tcp.acme.com*

3. SRV record for the internal GMS server(s), The service record for GMS servers will provide the connection/redirection to the right GMS server

    service: _ngms
    protocol: _tcp
    port: 443
    target: *gms.company.com*

    When done the SRV record(s) for the internal GMS should be in this format: _ngms._tcp. company.com

Make sure you create a separate SRV record for each internal server otherwise users will not be redirected to the right GMS server.

When all is configured correctly the users can setup their account on their device by only using *user@company. com* and they will be redirected to the right GMS server automatically.

Q: I need some helpdesk or password reset tool for GroupWise?

A: There are a few tools/applications available based on the REST API that can be used. These are not officially supported and written by Micro Focus but are a great addition to the gwadmin toolkit used by system administrators. These tools are available from *https://github.com/ mblackhamgw.*

As you will notice this is Morris Blackham's site for some of the tools he has developed to highlight the versatility of the GroupWise Admin REST API and made available to the world. The utilities are:

• **gwtopdown** - a GroupWise top down rebuild utility written in Python

• **gwpassword** - a web app written using PHP to allow GroupWise user password changes

• **gwhelpdesk** - a web app written with python using the popular Django framework. It runs on an OpenSUSE server.

Rob van Kooten is a Senior Technical Support Engineer for the EMEA Collaboration team. He joined WordPerfect in 1991 then transferred to Novell and now Micro Focus. He has delivered many GroupWise training courses and been a speaker at many events.

Jan-Arie Snijders is a Senior Support Engineer for the EMEA Collaboration team. He joined Novell in 2004 and transferred to Micro Focus as a result of the merger.

Ask The Experts: ZENworks

by Ron van Herk

In the past few months we have seen the release of ZENworks 2017 Update 1. It has been great to see the feedback from customers about this release, but as always I have had some questions.

Q: I used to have ZCM and ZAM but now only have ZAM. If I upgrade to ZENworks 2017 will it still requires me to enter a ZAM license key.

A: Indeed, ZENworks 2017 will require license key's to be entered for all components that were active on ZENworks 11.4. If any of the products have been dropped, you will need to de-activate these prior to the upgrade.

A similar problem shows up for some customers with the ZENworks Suite. Some Suite customers have entered the individual licenses for ZCM and one or more add-on products. In their Customer Center they will only find a key for the ZENworks 2017 Suite and not the individual products.

Before the upgrade to ZENworks 2017 enter the 11.4 Suite license in your existing environment to replace the individual license key's so that during the upgrade it will just ask to enter the ZENworks 2017 Suite license key.

Q: I'm using Full Disk Encryption and I have heard that if I want to upgrade FDE the device will need to be unencrypted and then encrypted again? This will make the upgrade a difficult process.

A: This is correct, in that...

With ZENworks 2017 Update 1 we indeed made some significant changes to the FDE component, and with these changes we updated the Linux kernel. FDE uses a tiny partition that has a small Linux environment and with the changes that were made with ZENworks 2017 Update 1 the FDE code doesn't fit
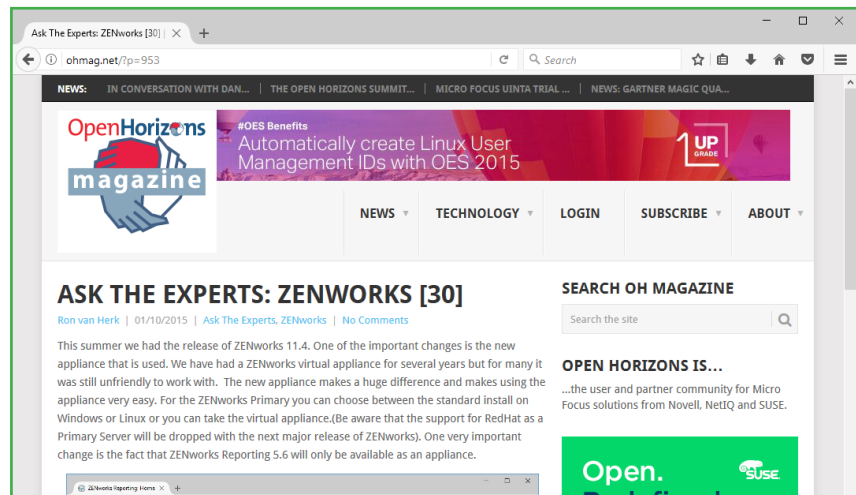
Figure 1: Read my previous columns on ohmag.net!

on the small partition any more. As changing the partition size doesn't work with an encrypted disk the only option to increase the partition size is to unencrypt and re-encrypt.

But..

Devices that were previously encrypted can just continue to use the existing FDE code from ZENworks 2017. New devices will automatically use the new FDE code. The changes in the ZENworks 2017 Update 1 code are mainly related to the support of new devices so for existing devices there is no need to upgrade.

At some point the support for the old FDE code will obviously get dropped, but by that time a large proportion of the devices will have probably been replaced or re-imaged and encrypted with the new code.

Q: I have installed the Reporting Server and use the internal web-certificate. Now I can't get Jasper Studio connected.

A: In the last year we have seen more people use the reporting server, and obviously this results in some questions from customers. In this case I can just refer to an old Q&A that I wrote a couple of years ago. Have a look at the Q&A from OH Magazine Issue 30 on www.ohmag.net (fig.1)

Q: Where can I learn more about using the reporting server?

A: Jason Blackett created a series of videos that he posted on youtube. Just go to https://www.youtube.com/ and search for ZENworks Reporting.

Ron van Herk has a long history with the Micro Focus ZENworks product range, starting with the Novell Application Launcher (yes, that was the original name). He spent 7 years as a support specialist at Novell technical Services focused on the various ZENworks components and currently works as a Technical Sales Consultant.
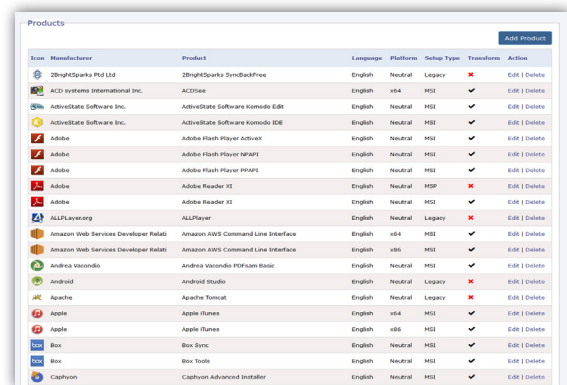
SETUP COMMANDER

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+

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