Networx Data Retrieval

Last updated by | Paul Kelleher | 17 Jun 2020 at 07:54 GMT

Introduction

This integration has been requested by Enabling Functions for us to retrieve and use analytical data from a recruitment partner.

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Users and Uses of Data

Overview

Data Access Scenarios

Data Processing and Storage Expectations

Existing RBAC Groups

Additional Groups/Controls required

Initial Data Classification

pknw1 request data transfers via a secure medium and depending on the data classification, that the data should be encrypted.

The data for this implementation is non-identifying, no-business impact and as such is recommended for "Company Confidential" - this recommendation has been arrived at as the data, while posing no threat of loss or domage to the company or its partners, could be of use to competitors when identifying skill requirements, or to other recreuiters who could use the data to target pknw1 more closely.

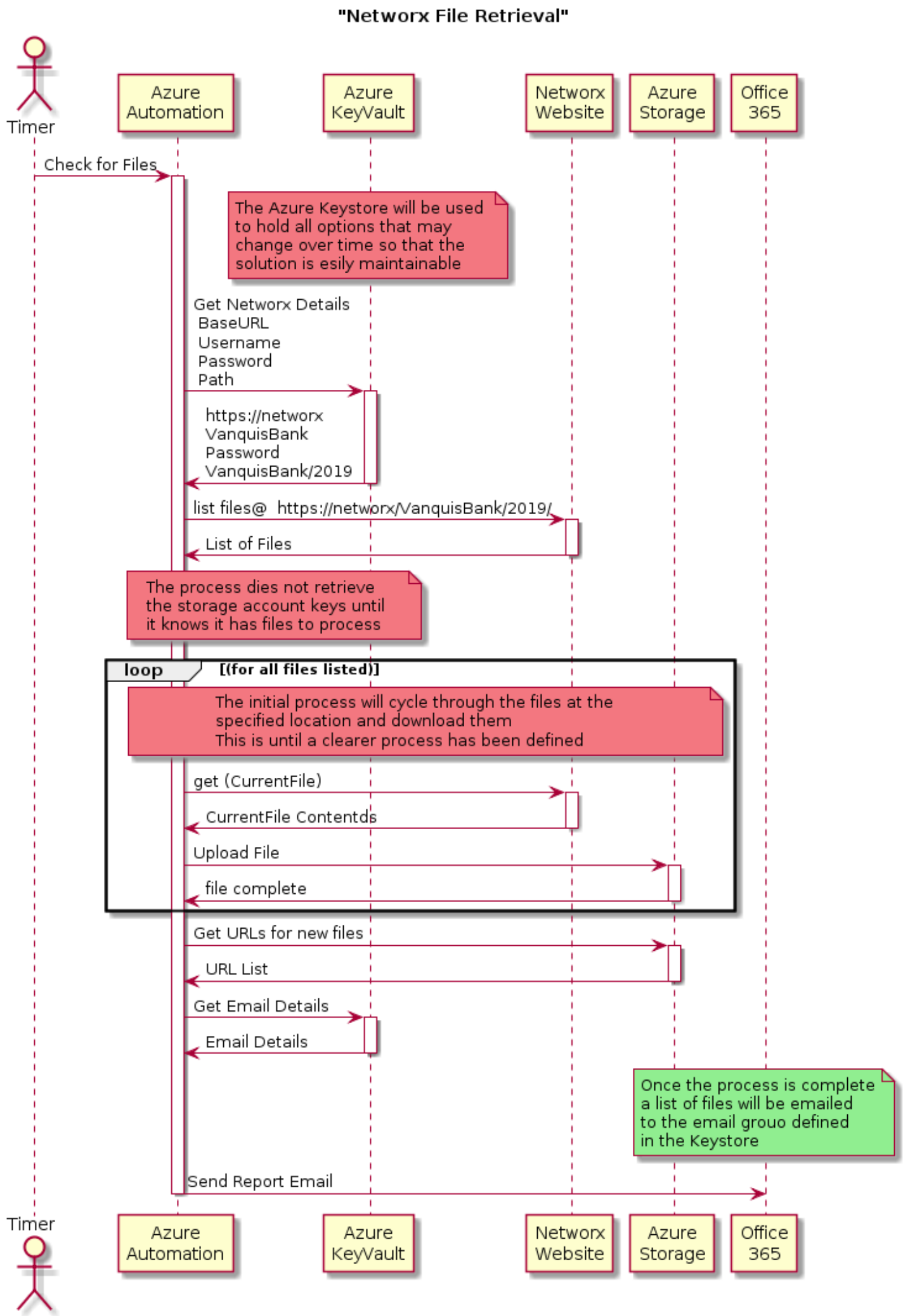
The final data classification and agreement will be between Security and the Data Owner.

Data Owner	SecOps approval	Initial Engineering Assessment	Initial SecOps Assessment
see Belinda	TBC	Paul Kelleher	Jonathan Brookes

Agreed Data Classification : ADD DETAIL HERE

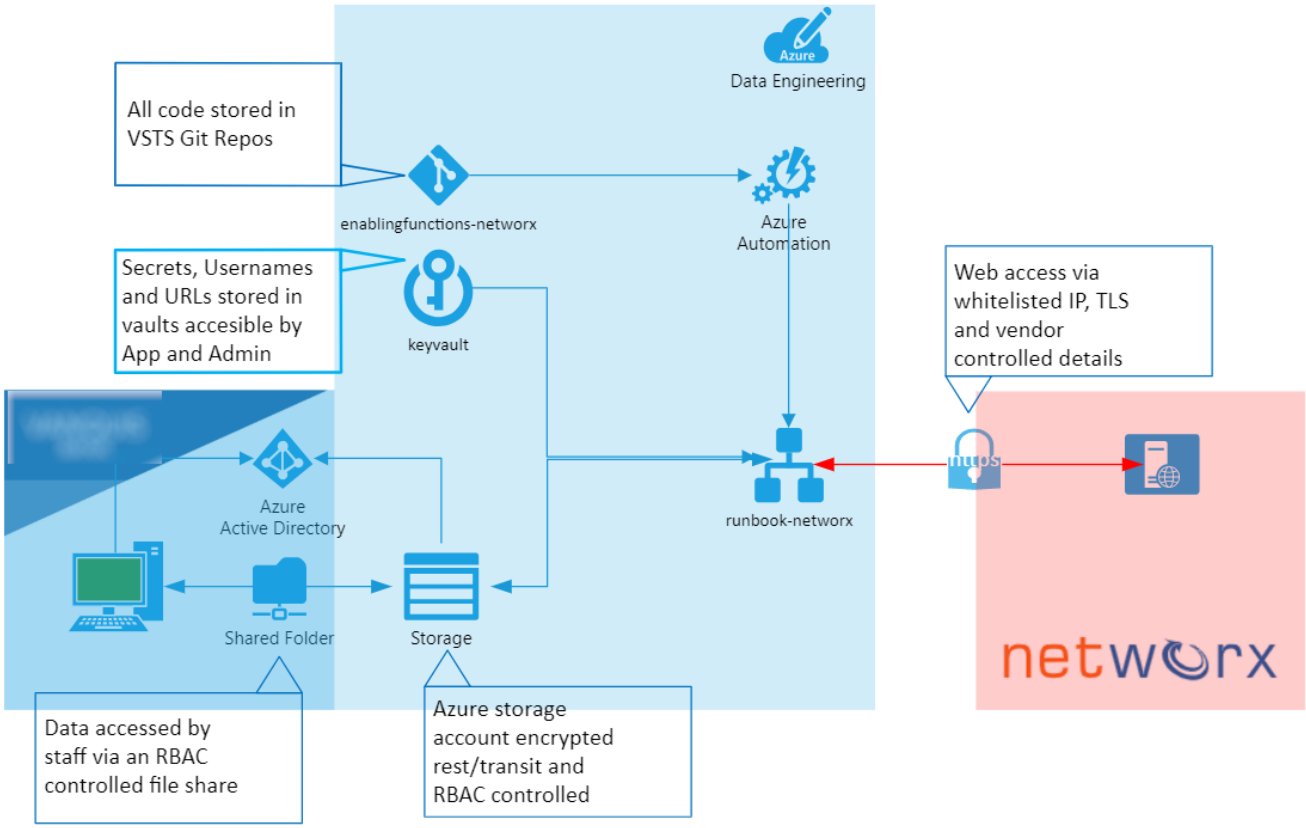
Data Retrieval Processes

- [x] using a pre-defined schedule
- [x] retrieve files from Networx
- [x] Upload to Azure Storage File Share
- [x] Email Updates


"Networx File Retrieval"
Timer
Azure Automation
Azure KeyVault
Networx Website
Azure Storage
Office 365
Check for Files
The Azure Keystore will be used to hold all options that may change over time so that the solution is esily maintainable
Get Networx Details
BaseURL
Username
Password
Path
https://networx
VanquisBank
Password
VanquisBank/2019
list files@ https://networx/VanquisBank/2019/
List of Files
The process dies not retrieve the storage account keys until it knows it has files to process
loop
[(for all files listed)]
The initial process will cycle through the files at the specified location and download them
This is until a clearer process has been defined
get (CurrentFile)
CurrentFile Contentds
Upload File
file complete
Get URLs for new files
URL List
Get Email Details
Email Details
Once the process is complete a list of files will be emailed to the email grouo defined in the Keystore
Send Report Email
Timer
Azure Automation
Azure KeyVault
Networx Website
Azure Storage
Office 365

Implementation

- [x] Production environment in Data Engineering Azure Subscription
- [x] All Resources controlled by Access Management with RBAC
- [x] All data stored encrypted and transferred encrypted (from perimeter to internal networks)



Technologies

Azure Automation

Azure Automation has been used to carry out the standard and repeatable workflow on a timely basis and was chosen due to

1. The unusual situation where the data is only available via secured https fileserver (and not sFTP)
2. The ease by which the solution can be paramaterised and any setrtings which may change in the future can be abstracted out to a simple config for ease of support and maintenance

PowerShell

Powershell within Azure Automation is the preferred language due to the number of functions that allow direct access to resources such as secure Key Vault and Azure File Storage

Azure Storage Accounts

Azure Storage (Files) has been used as it allows RBAC control and mapping within the company (due to low data classification) and will also be governed by Azure Policy, Azure Information Protection (when implemented) and has been configured to Mirrosofts DLP policy standards as well as the NCSC Cloud Principles

Office365 Email

All communications will use Email via Office 365 over Azure Notifications etc due to the non-technical user-base

Azure Components

Element	Value (Dev)	Value (Production)
Subscription	Data Engineering DevTest	
Location	West Europe	
Resource Group	rg-ams-data-ef-networkx	
Key Vault		
Automation Account		
Automation RunBook		
Storage Account		
AD Groups		
Service Accounts		

Variables used by the workflow

Variable Name	Content	Details	Link
BaseURL			
Path			
Filter			
httpsUsername			
httpsPassword			
StorageAccountName			
StorageAccountKey			
FileShareName			
Notifications			

Data Sources

Business Contact

- Name
- Details
- Contact Details
- Scope of Involvement

Technical Contact

- Name
- Details
- Contact Details
- Scope of Involvement

Technical Details

Item	Development	Testing	Production
URL			
Base Path			
Sub Paths			
File Extensions			
File Naming			
MIME Type			
Delivery Format			
Schedule			
Supplier Retention Policy			
Supplier Removal Policy			

Data Retrieval

Schedule

Detail of the agreed schedule for production wiull be located here

Data Storage

Details of the storage and processes will be here once agreed

Support

Networx (Supplier)

Support Agreement

Contacts

SLAs

PKNW1 Triage

Service Desk Support

Support Hours

PKNW1 Escalation

- [x] Issues should be escalated to the Data Engineering Team (paul kelleher) in the first instance, or via the Core Operations team otherwise.
- [x] At time of writing the SME's outside Data Infrastructure Engineering, for the technology used here, would be

Business Impact and severity ratings for Failures

Failure Scenarios

All issues with users from pknw1 accessing the Storage Account (network share) or files that have been transferred should **always** be referred to Access Management via the Service Desk as permissions or group membership are often the reason for no access or access changing

All issues should be verified with other users before escalation to ensure that the issue is not single user/account/permissions based

Access should be tried from other computers to ensure it is not PC based

From PKNW1

Users cannot access the files via the network mount from their desktops (as they have before)

- [ ] if the issue affects some users and not others, then the storage account is available and either the user access or the path from the users location to Azure has been degraded or blocked -> Raise the issue with Service Desk for Networks; be sure to confirm the locations that people are experiencing issues.

- [ ] All users cannot access the network folder/share

- [ ] All users can access the share but the files are missing/corrupted

The files are not being updated - new files do not arrive

- [ ] Check username/password
- [ ] Check https access from Azure to the Supplier
- [ ] Verify our white listed IP

No Users can mount the Storage Account

- [ ] Stroage Account Firewall Blocking
- [ ] SMB Blocking
- [ ] Data Classification etc via POowerBI
- [ ] Routing Changes

From Supplier

The supplier has seen errors in their logging and come to us

Debugging

The code has debug elements commented out which can be enabled to provide verbose output of the processes to enable problem resolution