



Business Transformation Programme

Review and Update Approach (for Decom, Migrate & Archive Pathways)

Version	Date	Description	Author
0.1	20/09/2019	Created Executive Summary document	
0.2	23/09/2019	TLO team Peer Review	
0.3	25/09/2019	Decommissioning team and Accenture review	
0.4	30/09/2019	Renamed to D4197 Review and Update Approach (for Decom, Migrate & Archive Pathways/D2132). Updated with Accenture changes to the main report D2132	
0.5	02/10/2019	Updated with review and latest revisions in the 2019 Archive strategy (Data)	
0.6	17/10/2019	Updated with changes from the review release of the 2019 Archive strategy (Data)	
0.7	18/10/2019	Updated with Lead Architect feedback submitted to PMO for TDA meeting	
1.0	25/10/2019	Significant changes to the document with the D2132 strategy now having its own summary document for the TDA (and renamed to D4205). This paper now only summarises the outcomes for the D4205 Strategy Paper	
1.1	15/11/2019	Workstream QA complete; circulated to Responsible and Accountable Persons for approval	

Version: 1.1 Final

Date Endorsed/Approved: TDA 5/11/2019, TADC 14/11/2019

Architecture and Design

Prepared by:

Document control

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Contact Person	
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Document Sign-off

Formal Review Area	Name	Signature	Date
Accountable Person	<i>Lead Solution Architect</i>		
Responsible Person	<i>Architecture and Design Lead START Release 5 Programme Manager</i>		
The following have supported the development of this document:			
The following have been consulted:	<ul style="list-style-type: none"> • TDA – Presented for Inform & Endorsement • TADC – Informed 		05/11/2019 (TDA) 14/11/2019 (TADC)

D4197 Review & Update Approach for Decom, Migrate & Archive Pathways

Executive Summary

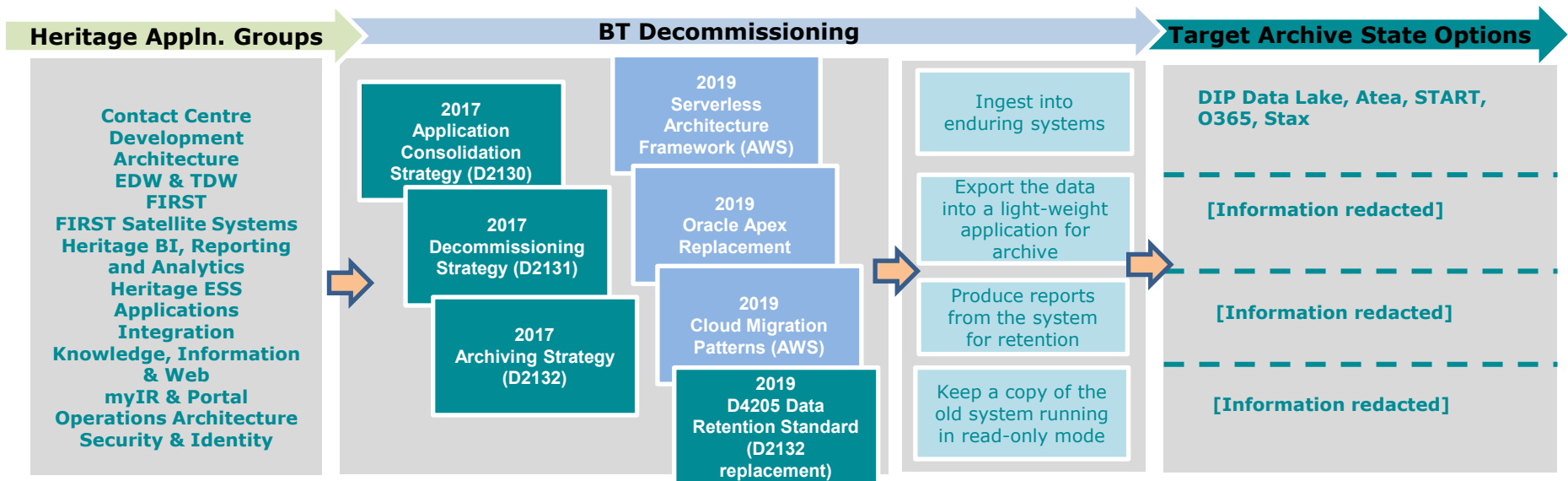
This document assesses archive and data management strategies, specifically:

- *D2132 Archiving Strategy 2017*
- *D2130 Application Consolidation Strategy 2017*
- *D2131 Decommissioning Strategy 2017*
- *D4205 Data Retention Standard 2019 (update version of D2132).*

The following design papers help inform the candidate technology options and are referenced:

- *Cloud Migration Patterns*
- *Serverless Architecture Framework*
- *[Information redacted]*

The findings and analysis - from the TLO [Information redacted] Exit plans and most recently, Decommissioning progress and process documentation - are also assessed.



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Executive Summary

Conclusions on the updated Strategy:

The 2017 Archiving Strategy document D2132 has recently been revised and released for TDA approval by the "R4 Environments Arch & Design" team. The new document is called "D4205 Data Retention Standard". Key findings from this revision include:

- The papers' key goal is ensuring that IR is meeting the requirements for destruction and retention of data in the "Inland Revenue Retention and Disposal Schedule".
- Having an automated method of processing data to apply retention and destruction rules.
- Archiving system back-ups enable recovery of lost data but aren't the official archive.
- Heritage application archive data to be moved to the ideal transition repository. Option list provided.
- New systems and Heritage systems, that will endure after the BT Programme, need to provide a method to comply with retention and disposal requirements; this is identified as a key risk.
- Ensuring the future-state application meets the archive requirements.

Conclusions for the Decom processes and its alignment with the strategy:

- IR has been following the archiving strategies and progress is currently on track, working through the decommissioning and archiving of the 400-plus Heritage applications.
- So far 90 applications have already been decommissioned. Of the 244 apps in scope up to Release 4, 187 are completed. The Decom processes have been enhanced to check viability of what gets archived.
- The BT Release 5-timed applications are starting their initial analysis. This will be dependant on the Enduring Application managing the disposal requirements.

Recommendations:

- Note the future apps not meeting the disposal risk identified from the revised Archive Strategy paper D4205.
- Note the key IR future-state application owners are being followed up to define their archive capabilities as part of the D4205 Archive Strategy review.
- Note the new D&A archive assessment governance processes to support the existing Design governance processes.
- Note the 2019 D4205 Data Retention Standard is still to be formalised through the TDA governance prior to this document's TDA discussions.

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Key D4205 Archive Strategy updates

The key 2017 Archiving Strategy paper D2132 has been replaced by the 2019 "D4205 Data Retention Standard" paper. This was updated by the BT Release 4 Environments team.

The key changes to the 2017 strategy include:

- IR needs a data management approach that meets the following key objectives:
 - Reducing long term cost of storage infrastructure
 - Ensure that data growth is controlled so that databases remain manageable
 - Lowering the administrative burden of data management with automation
 - Meeting requirements for destruction and retention of data in the "Inland Revenue Retention and Disposal Schedule".
- Having an automated method of processing data to apply retention and destruction rules.
- New systems and Heritage systems that will endure after the BT Programme should provide a method to comply with retention and disposal requirements in the primary online data set.
- IR to consider if backups should be retained and excluded from retention rules as they are a point in time snapshot of the entire data set and will protect against unintentional data loss.
- Older systems such as Heritage applications that are being replaced/retired by BT can be dealt with in several ways and will need to be evaluated individually for the most appropriate method based on each system. Refer to Appendix 1 for the approaches and the technology options and Appendix 2 for the example scenarios.
- Further follow-up with the key future-state application (START, STAX, DIP and SharePoint) to clarify if they have the required archive rules and process embedded.

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Linking D4205 Archive Framework to the Decom & TDA design processes

Identify

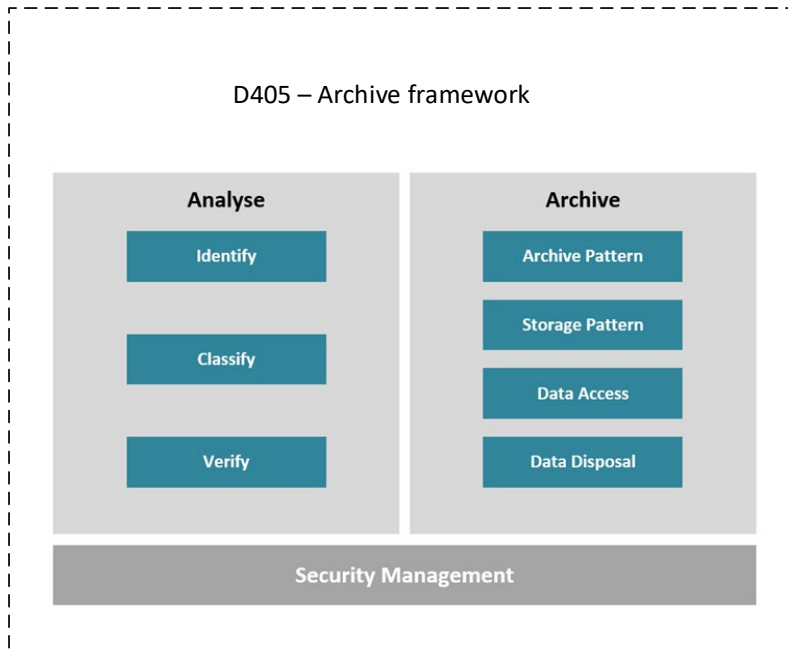
- Identify data functions (Data use, Search access)
- Identify interdependencies
- Identify stakeholders (user access, frequency)
- Identify data structures (Able to view as images, Need for code to interpret data for view)

Classify

- Data Category
- Data Class
- Data Sub Class
- Retention Period
- Retention Approval
- Disposal Approval

Verify

- Disposal Schedule Governance (PRA Executive Sponsor)
- Decommissioning Assessment TLO Governance
- TDA archive design governance



Archive Pattern

Archive Pattern analysis
(Database Archive, Application Image Archive, Data Extract & In Application Archiving)

Application Affinity analysis
Select target environment
Confirm source and destination systems
Identify transfer pattern
Determine extract and load rules

Storage Pattern

High Performance Storage (NSP/Cloud)
Low Performance Storage (NSP/Cloud)
Offline Storage

Security Management

- Data in Transit is secured
- Data at Rest is Secured

Data Disposal

- Target system data life cycle management functionality setup
- Deletion process & approvals embedded
- Disposal process set-up.
- Ensure archived data is read only and identifiable as archive data.

Data Access

- Request access to archive
- Maintain Archive Accessibility & Readability

Process Key

Current Decom activities

TLO activities

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Archiving related processes

- The Decommission Team are using a Master List of Heritage Applications as the key tracking record for applications that are to go through the “Decommission and Archive process”. Refer to Appendix 3.
- The BT Programme maps out the future applications which are candidates for retaining the Heritage Archive data.
- The D&A workstream has implemented additional process steps (in the “TDA Design process”) to validate the value proposition of the archive processed.
- The “Data Destruction in AWS process” covers the specific activities for AWS archiving.

TDA Design Process



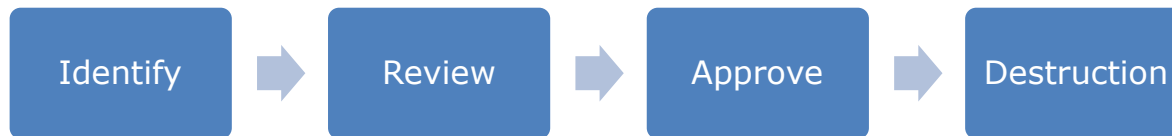
Decommissioning Team

- Undertake Discovery.
- Identify and liaise with stakeholders.
- Classify Data.
- Get approval and Authorisation for disposal of data.
- Migrate applications as required.
- Meet compliance requirements.
- Seek approvals.
- Decommission as required.

Decommissioning and Archiving Process



Data Destruction in AWS



Process Key



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Archive Assessments

A key part of the design process for applications that are targeted for replacement is the Enduring Status Assessment. Refer to Appendix 4 for a detailed process diagram of this activity. This is a formal TDA/TADC governance formal review of the application and business outcomes and what is required to occur to migrate/decommission the application.

Key activities

- Review business requirements.
- Align with the future enterprise capabilities (START, DIP, STAX etc).
- Consult with the Business and BT technology stakeholders.
- Recommend next steps:
 - Options for what should be replaced, if required (potential RFP).
 - No further action, carry on to decommissioning.
 - Enduring - requires re-platforming of the current application.
- TDA and TADC governance of the assessment.

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Decom team Progress

The Decommissioning team has made significant progress with its analysis cycle to decommission every Heritage application. In the master "Decommission & Archive Application Register" (refer Appendix 5 for link), it identified approximately 400+ applications in Heritage that requires a Decommissioning assessment.

The review status at the start of October 2019 has 187 completed, of 244 identified, for Release 4 decommissioning. 150 applications are in the BT Release 5 timeframe for archiving. All the applications (classified by BT Architecture application groupings) that are enduring are identified and the analysis for how they will be enduring is in progress.

Refer to the "D&A Status report" for the recent progress with Decommissioning. Link in Appendix 5.

[Information redacted]

APPENDIX

1. Heritage Applications approach - systems not active after BT.
2. Heritage Applications approach - scenario examples.
3. Master Archive Application Register - example view.
4. Document References.

Appendix 1

Heritage Applications approach - systems not active after BT

Approach for systems not active after BT	Target future-state options	Document references that inform options
Ingest into enduring systems	DIP Data Lake, Atea, START, O365, Stax File System	"IT Transition Future State Model"
Export the data into a lightweight application for archive	[Information redacted]	"Serverless Architecture Framework"
Produce reports from the system for retention	[Information redacted]	"Cloud Migration Options"
Keep a copy of the old system running in read-only mode	[Information redacted]	"Cloud Migration Options"

**IT Transition
Future-state Model**



[Information redacted]

Appendix 2

Heritage Applications approach - Scenario examples

Candidate Application	Scenario
DIP Data Lake	Records from the EDW or TDW or any other OLAP repository that need to be retained.
Atea	HR & Finance systems data into the new[Information redacted]
START	Tax records that are pertinent to operational activities and legally required to be retained.
O365	Emails and Office notes.
AWS – running the existing application	Application data that needs to stay entwined with the application to be accessible. Note this is the last resort as maintaining an old application means it need to be kept supported and running! Also note there is an approved set of TDA standard patterns for moving existing applications to AWS.
[Information redacted]	

Cloud Migration Options (AWS)



[Information redacted]

Appendix 3

Decom Master Archive Application Register - example view

LEGEND:									
0-TBC									
1-Not Started									
2-Discovery/Initial Analysis									
3-Detailed Analysis									
4-Decomm Prep									
5-Decomm Work									
6 Monitoring (non D&A)									
7-Decomm Complete									
8-									
9-Hold (Change Freeze)									
10-Hold (Dependency)									
Application	Release	Category	Lead	Assist	JIRA ticket	Stage	Dependency / Notes	Memo sign off date	Data Disp Date
360 Degree Feedback	Done	Historic			n/a	7-Decomm Complete	Archived in AWS		2024
360 Degree Survey	Done	Historic			n/a	7-Decomm Complete			
7 Week Report	Done	Historic			n/a	7-Decomm Complete			
Action Remedy System	R4	Operations Management	Lois		BTDA-290	2-Discovery/Initial Analysis			

Appendix 4

Enduring Assessment Overview Diagram



[BT Issues](#) / BTI-858

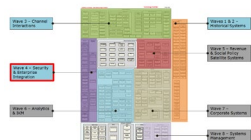
Architects need to develop approach and framework around system and technology owners and roadmap

Description

A number of applications are currently listed as an enduring application as part of the App Consolidation work.

D&A need confirmation whether this is correct and it needs to be migrated to AWS or NSP or whether it will be replaced by another tool and thus can be decommissioned (and if so, when this should occur)

This is required as the application must be moved from the existing data centre as part of our exit by 2021.

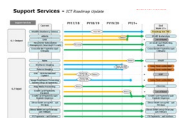


Decommission Wave Analysis

Issue Links

relates to

BTI-583 Is EA Spax to be decommissioned or an enduring application to...	IN PROGRESS
BTI-584 Is Exigen to be decommissioned or an enduring application to be...	IN PROGRESS
BTI-585 Is Nuix to be decommissioned or an enduring application to be mi...	IN PROGRESS
BTI-401 Is Password Pro an enduring app to be migrated or to be decom...	IN PROGRESS
BTI-402 Is the Cheque processing system an enduring app to be migrated...	IN PROGRESS



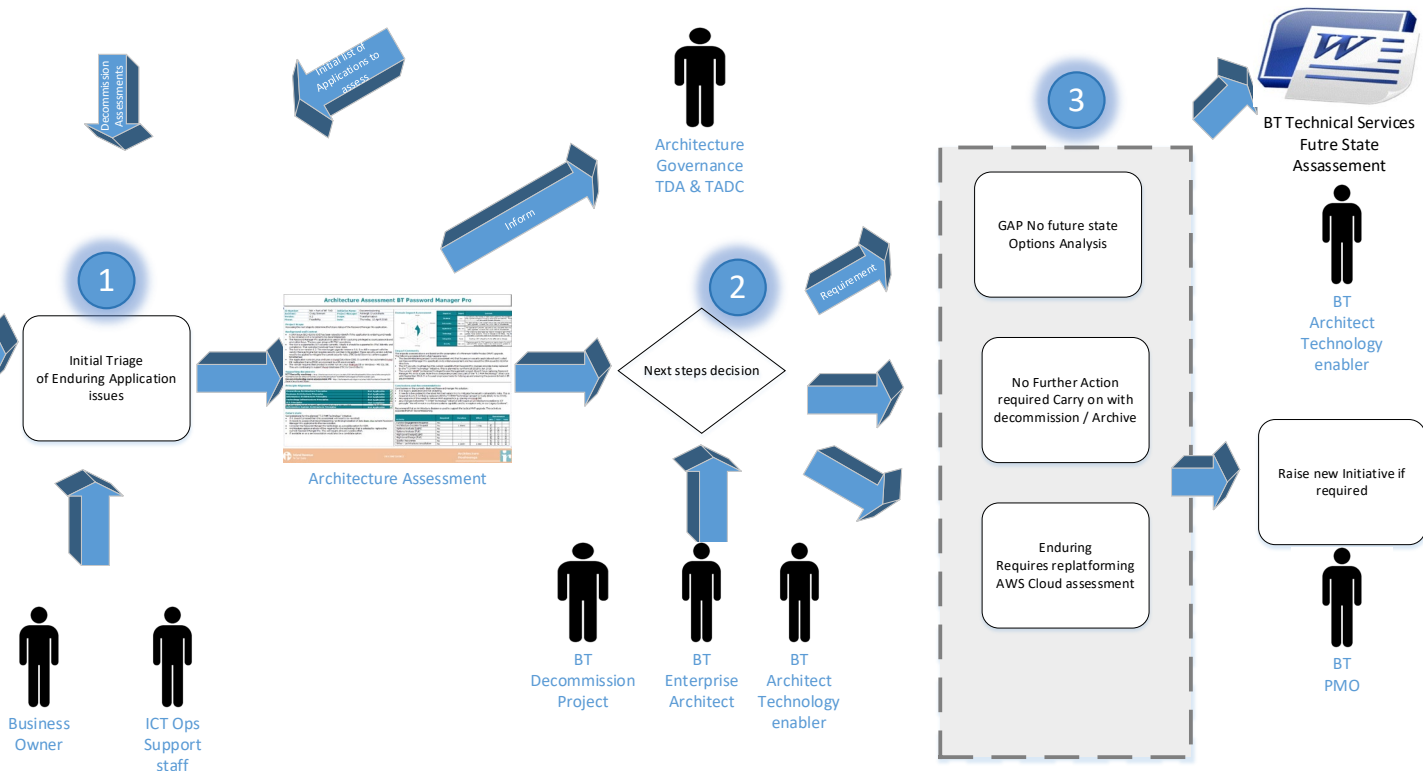
ICT Road Maps



BT Road Maps



COE & SOE



Appendix 5

Document References

Document Name	Description	Reference Link
Decommissioning and Archiving Master Register.	Master list of the Heritage applications and their progress through the Decom process.	https://irnz.sharepoint.com/:x:/r/sites/BT/Decom/Plan/Master%20Decommissioning%20and%20Archiving%20Register.xlsx?d=w63c487b2f2f848049088a0d4030ebb09&csf=1&e=TkNjfq
Decom and Archiving Processes.	Detailed Archive process from the Decommissioning Team. This expands on the steps identified in the HL block plan and splits out the activity accountabilities.	https://irnz.sharepoint.com/:w:/r/sites/BT/Decom/Art/Decom%20and%20Archiving%20processes.docx?d=wb8416bf644794c6597c4f91db67b6219&csf=1&e=fRckj8
Archive Strategy (Data).	2019 Updated replacement for the D2132 Archive Strategy. Currently out for Review.	https://irnz.sharepoint.com/:p:/r/sites/BT/Cloud/_layouts/15/doc2.aspx?sourcedoc=%7B9BBB715B-AEF9-43A3-91BD-3766E040743F%7D&file=BTDD%20Archiving%20Assumptions%20and%20Approach%20V0.04.pptx&action=edit&mobileredirect=true&DefaultItemOpen=1Kobus&cid=4dfd7386-0f62-45c3-8851-92513c858dc6
D2132 Archiving Strategy.	2017 Exec presentation and full deliverable report.	https://irnz.sharepoint.com/:w:/r/sites/BT/_layouts/15/Doc.aspx?sourcedoc={9BA9036E-C312-4766-8AE9-A27302230FF2}&file=D4151_C_and_A_Request_Serverless_Architecture.docx&action=default&mobileredirect=true&DefaultItemOpen=1
D2130 Application Consolidation Strategy.	2017 Exec presentation and full deliverable report.	https://irnz.sharepoint.com/:p:/r/sites/BT/_layouts/15/Doc.aspx?sourcedoc=%7BD1B8091A-80D3-4E78-B681-5C625B9E5F7C%7D&file=D2130%20Decommission%20Strategy%20Executive%20Summary.pptx&action=edit&mobileredirect=true&DefaultItemOpen=1
D2131 Decommissioning Strategy.	2017 Exec presentation and full deliverable report.	https://irnz.sharepoint.com/:w:/r/sites/BT/PMO/_layouts/15/Doc.aspx?sourcedoc=%7B20CFA444-CCD0-48C4-91DC-1FE5C4B9DEE1%7D&file=D2131%20Application%20Consolidation%20Strategy%20-%20Deliverable%20doc%20-%20signoff.docx&action=default&mobileredirect=true&DefaultItemOpen=1
D&A status report.	Latest status report Decom team	https://irnz.sharepoint.com/:p:/s/BT/Decom/EZoYqHE_PhXmpoAIDjHRs5cBNRaW7S4eSvJf7EQwTY2Iow?e=UMqfJT
Cloud Migration Patterns.	2019 Standard usage patterns for deploying Archive Applications to [Information redacted] platform.	https://irnz.sharepoint.com/:p:/r/sites/BT/Cloud/_layouts/15/Doc.aspx?sourcedoc=%7BA505B7B9-075A-41A4-AB85-3D5A2615A671%7D&file=Cloud%20Migration%20Patterns.pptx&action=edit&mobileredirect=true
Serverless Architecture Framework.	2019 D4151 - Utilising [Information redacted] to provide IR with a lightweight applications capability moving forward.	https://irnz.sharepoint.com/:w:/r/sites/BT/_layouts/15/Doc.aspx?sourcedoc={9BA9036E-C312-4766-8AE9-A27302230FF2}&file=D4151_C_and_A_Request_Serverless_Architecture.docx&action=default&mobileredirect=true&DefaultItemOpen=1