CTX-Backup-Flows
User Guide

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Versions

Document Revisions

The following revisions have been made to this document

Date	Revision	Notes
07/03/2019	1.0	First Release

Module Versions

The following revisions have been made to this document

Module Version	Release Date	Comments
1.0	08/03/2019	Creation of: * BF-Backup-Flows-From-Config * BF-Backup-Flows * BF-GCAT-Get-Cortex-Authentication-Token * BF-PPR-Process-PowerShell-Response * BF-RMFFB-Remove-Missing-Flow-from-Backup

Preface

About this Manual

This document is a user guide for the CTX-Backup-Flows module.

Audience

The audience for this document is those wanting to understand how to use CTX-Backup-Flows module.

Related Material

Document
CTX-Backup-Flows – Deployment Plan
CTX-Backup-Flows.studiopkg

Abbreviations used in this Document

DB Database

JSON JavaScript Object Notation

Requirements

The CTX-Backup-Flows module requires the following:

- Minimum Cortex v6.4 installed on the Cortex Application Server
- Cortex PowerShell OCI
- CTX-Email Module

Integration

Integration with Third-Party Systems

None

Integration with Existing Infrastructure

To use this module, Cortex needs to be able to connect to the 'CortexWeb' DB which stores details of all the flows within Gateway. For this to work, the Cortex Database Interface service account must have Read permissions to that DB.

1 Backup Flows Overview

The Cortex Backup Flows module is intended to provide automated backing up of flows from Cortex environments. It is possible to back up the entire system into a .studiopkg file, or to create multiple files organised logically (for example per-solution or project).

The flow should run on a schedule and check which items are due to be backed up. This will also handle clearing out of any old backups if appropriate, based on the required data retention.

1.1 Backup Types

The required backup type is specified in a config file, and support 3 different types:

- Backup System
- Backup Groups
- Backup Flows

Any backup operations need to be defined in their own config files, and a general config file is also needed. These are details later in the document.

1.1.1 Backup System

This configuration will backup every flow and subtask in the Cortex Gateway environment.

On the event of an exception, any individual flows which cause an issue will be excluded and the backup will be re-run.

1.1.2 Backup Group(s)

This configuration allows the user to specify a group of list of groups to backup. Any Flows / Subtasks within this group will be backed up.

On the event of an exception, any individual flows which cause an issue will be excluded and the backup will be re-run.

1.1.3 Backup Flow(s)

This configuration allows the user so specify a Flow / Subtask, or a list of Flows / Subtasks to backup.

On the event of an exception, any individual flows which cause an issue will be excluded and the backup will be re-run.

1.2 Using the Module

1.2.1 General Config File

The General Config contains a set of parameters required for any logging operations. This should be stored in the location referenced in the Global Variable ‘g_backup-config-path’. The file is a JSON file called ‘GeneralConfig.json’ with the following parameters.

1.2.1.1 General Config Parameters

Config Parameter	Details	Example
GatewaySourceHost	The Cortex Gateway URL	https://CTXAppServer/gateway
SQLServer	The fully qualified SQL Server Name	CTXDBServer.MyDomain.com
SQLUser	The Cortex Database Interface User	MyDomain\CTX_CerberusDB
SQLPass	The encrypted Password for SQLUser	#_2132070611281330761980440531081500730581391512061~0600652382371771!225210117133027107049186117027253#
RetentionPeriod	The number of days to keep backups for	30

1.2.1.2 File Contents

```
{
  "GatewaySourceHost":" https://CTXAppServer/gateway ",
  "SQLServer":" CTXDBServer.MyDomain.com",
  "SQLUser":" MyDomain\CTX_CerberusDB",
"SQLPass":"#_213207061128133!0761980440531081500730581391512061~0600652382371771!225210117133027107049186117027253#",
  "BackupConfigPath":"C:\Backup",
  "RetentionPeriod":30
}
```

1.2.2 System Backup Config File

The System Backup Config contains a set of parameters required backing up the entire system. This should be stored in the location referenced in the Global Variable ‘g_backup-config-path’.

1.2.2.1 System Backup Config Parameters

Config Parameter	Details	Example
File	The base file name	SystemBackup
Path	The path to back up this set of flows to	C:\Backup\Flows
GatewayUser	A valid username for a Cortex Gateway User	User1
GatewayPass	The encrypted Password for Cortex Gateway User	#_2132070611281330761980440531081500730581391512067~060065238237177!2252101171330271070491861170272533#

1.2.2.2 File Contents

```
{
  "File":"SystemBackup",
  "Path":"C:\Backup\Flows",
  "GatewayUser":"user1",
"GatewayPass":"#_203205097120090!112110064126077148001065102083098~106069205020053!199122126161199122050110227014021#"
}
```

1.2.3 Group Backup Config File

The Group Backup Config contains a set of parameters required backing up every child item of a group, or list of groups. This should be stored in the location referenced in the Global Variable ‘g_backup-config-path’.

1.2.3.1 Group Backup Config Parameters

Config Parameter	Details	Example
File	The base file name	GroupsBackup
Path	The path to back up this set of flows to	C:\Backup\Flows
GatewayUser	A valid username for a Cortex Gateway User	User1
GatewayPass	The encrypted Password for Cortex Gateway User	#_2132070611281330761980440531081500730581391512067~060065238237177!2252101171330271070491861170272533#

Groups	Comma Separated Name of Names of the Group(s) to backup	Project 1, Generic Subtasks, Reporting Flows

1.2.3.2 File Contents


```
{
  "File":"SystemBackup",
  "Path":"C:\Backup\Flows",
  "GatewayUser":"user1",
"GatewayPass":"#_203205097120090!112110064126077148001065102083098~106069205020053!199122126161199122050110227014021#"
  "Groups":" Project 1, Generic Subtasks, Reporting Flows ",
}
```


1.2.4 Flow Backup Config File

The Flow Backup Config contains a set of parameters required backing up every required Flow and can either be set to one flow or a comma separated list of flows. This should be stored in the location referenced in the Global Variable ‘g_backup-config-path’.

1.2.4.1 Group Backup Config Parameters

Config Parameter	Details	Example
File	The base file name	FlowsBackup
Path	The path to back up this set of flows to	C:\Backup\Flows
GatewayUser	A valid username for a Cortex Gateway User	User1
GatewayPass	The encrypted Password for Cortex Gateway User	#_2132070611281330761980440531081500730581391512061~060065238237177!225210117133027107049186117027253#
Flows	Comma Separated Name of Names of the Flow(s) to backup	Test-REST-Integration, Test-SOAP-Integration

1.2.4.2 File Contents


```
{
  "File":"SystemBackup",
  "Path":"C:\Backup\Flows",
  "GatewayUser":"user1",
```

"GatewayPass":"#_203205097120090!112110064126077148001065102083098~106069205020053!199122126161199122050110227014021#",
"Flows":" Test-REST-Integration, Test-SOAP-Integration ",

}

2 Module Subtasks

2.1 BF-GCAT-Get-Cortex-Authentication-Token

2.1.1 Overview

This subtask logs in to Cortex Gateway using a REST request.

This returns a Bearer Token which can be used to authenticate REST requests such as Exporting / Publishing flows.

2.1.2 Input variables

Name	Type	Comments
GCAT_i_HostURL	Text	the Cortex Gateway URL
GCAT_i_GatewayUser	Text	A valid User to login with
GCAT_i_GatewayPassword	Text	The encrypted password for the user

2.1.3 Output variables

Name	Type	Comments
GCAT_o_Bearer-Auth-Token	Text	The Bearer Token from the Login

2.2 BF-PPR-Process-PowerShell-Response

2.2.1 Overview

This subtask processes the PowerShell response. If there were any error records it appends all these and raises an error. If not, it can either return the output as a list or as a text depending on the users choice

2.2.2 Input variables

Name	Type	Comments
PPR_i_ps-response	Structure	The response from the PowerShell block
PPR_i_convert-to-text-bool	Boolean	Truth value where 'true' indicates to return it as text

2.2.3 Output variables

Name	Type	Comments
PPR_o_ps-list	List	Variable containing the output
PPR_o_ps-text	Text	Variable containing the output

2.3 BF-RMFFB-Remove-Missing-Flow-from-Backup

2.3.1 Overview

This subtask removes an erroring flow from the backups. This is normally caused by a missing .flow file which still has an entry in the DB.

The erroring flow name is used to find the UUID, which is then removed from the list and passed back to the flow.

2.3.2 Input variables

Name	Type	Comments
RMFFB_i_missing-flow	Text	The name of the flow to remove
RMFFB_i_flows-json	Text	The JSON list of flows to backup
RMFFB_i_backup-db-server	Text	The DB Server containing CortexWeb

2.3.3 Output variables

Name	Type	Comments
RMFFB_o_backup-flows-json	Text	The JSON list of flows without the flow to remove

3 Backup Flows

3.1 BF-Backup-Flows-From-Config

3.1.1 Overview

This flow should handle the backup of Cortex flows based on the JSON file configurations.

The flow will get the required flow(s) (whether the names of flows are passed in, or the name of a group or nothing, which will back up the entire system).

This will then do some processing against the CortexWeb DB and pass the details into the flow 'BF-Backup-Flows'.

Note that the variable 'g_backup-config-path' needs to be initialised with the path containing all the backup config files.

There are also 3 global variables required for handling any exceptions via email:

- g_exception-emails – Comma separated email addresses to receive the details
- g_email-from-address – the Email Address to send the email
- g_smtp-server – Fully Qualified name of the SMTP Server

3.2 BF-Backup-Flows

3.2.1 Overview

This flow will back up all the inputted flows and is called from BF-Backup-Flows-From-Config.

The following variables need to be passed in to backup the flows.

- g_export-location
- g_export-filename
- g_list-of-flows
- g_sql-server
- g_gateway-username
- g_gateway-encrypted-password
- g_SourceHost

This is handled from the BF-Backup-Flows-From-Config flows.

