Supply Control

|  |  |
| --- | --- |
| Type: | BehaviorGroup |
| Name: | Supply Control |
| Id: | 91cb89b6-a2ce-44ff-b3a0-f0cb3f117e56 |
| Visual: | <i>SC</i> |
| Tooling: | SC |
| Version: | 1.0 |

## Definition

A token class that implements this behavior will provide controls to increase and decrease supply of tokens within the class. Additionally, it will include the ability to support a role, like Minters, that will be allowed to invoke the Mintable behavior. The owner can add accounts to the role and any account that is a member of the role will be able to mint tokens in the class.

## Example

## Analogies

|  |  |
| --- | --- |
| Name | Description |
| Central Bank | Implementing monetary policy for this token. |

## Comments

Define a Minters role and apply the role to the Mintable behavior.

## Dependencies

|  |  |  |
| --- | --- | --- |
| Artifact Type | Symbol | Description |

## Incompatible With

|  |  |  |
| --- | --- | --- |
| Artifact Type | Symbol | Id |
| Behavior | s | c1189d7a-e142-4504-bf26-44c35b76c9d6 |

## Influenced By

|  |  |  |
| --- | --- | --- |
| Description | Symbol | Applies To |
| Create a Minters Role and apply it to the Mintable behavior to provide authorization checks for invoking the behavior. | r | [ ] |

## Artifact Files

|  |  |  |
| --- | --- | --- |
| Content Type | File Name | File Content |
| Control | supply-control.proto |  |
| Uml | supply-control.md |  |

## Code Map

|  |  |  |  |
| --- | --- | --- | --- |
| Map Type | Name | Platform | Location |

## Implementation Map

|  |  |  |  |
| --- | --- | --- | --- |
| Map Type | Name | Platform | Location |

## Resource Map

|  |  |  |  |
| --- | --- | --- | --- |
| Map Type | Name | Location | Description |

# Behavior Group Details

## Behavior Reference: Mintable

Reference Notes: Mintable in SupplyControl will be bound to the Roles behavior to determine if the requesting minter is allowed to invoke the behavior.

|  |  |
| --- | --- |
| Is External: | False |
| Constructor: |  |

### Applies To

### Invocations

### Influence Bindings

### Properties

## Behavior Reference: Burnable

Reference Notes: Burnable is not modified from the referenced behavior.

|  |  |
| --- | --- |
| Is External: | False |
| Constructor: |  |

### Applies To

### Invocations

### Influence Bindings

### Properties

## Behavior Reference: Roles

Reference Notes: Roles support requires that a role or group called 'Minters' be created that allows for account to be added. These accounts will be allowed to invoke MintTo.

|  |  |
| --- | --- |
| Is External: | False |
| Constructor: |  |

### Applies To

|  |  |
| --- | --- |
| Type: | Behavior |
| Name: | Mintable |
| Id: | f9224e90-3cab-45bf-b5dc-0175121e2ead |
| Visual: | <i>m</i> |
| Tooling: | m |
| Version: | 1.0 |

### Invocations

### Influence Bindings

Influenced Id: f9224e90-3cab-45bf-b5dc-0175121e2ead

Influenced Name: Mintable

Influenced Invocation Id: 70499b23-a1dd-4c87-90d6-6e45400f28b5

Influence Type: Intercept

Influencing Invocation:

### RoleCheck

Id: 00a665e3-1dda-441e-8262-5750435c153c

Check to see if the account is in the Role called 'Minters'

#### Request

Control Message: IsInRole

Description: Checking the 'Minters' role.

#### Parameters

|  |  |
| --- | --- |
| Name | Value |
| AccountId | AccountId of the requestor. |

#### Response

Control Message: True/False

Description: Respond true if the account is in the 'Minters' role.

#### Parameters

|  |  |
| --- | --- |
| Name | Value |
| IsInRole | True/False |

Influenced Invocation:

### MintTo

Id: 70499b23-a1dd-4c87-90d6-6e45400f28b5

A request to create new token instances in the class by the owner or a party or account in a role that is granted this permission to another party or account. Requires a To and Quantity fields in the request.

#### Request

Control Message: MintToRequest

Description: The request

#### Parameters

|  |  |
| --- | --- |
| Name | Value |
| ToAccount | Account Id to mint the tokens to. |
| Quantity | Number of new tokens to create. |

#### Response

Control Message: MintToResponse

Description: The response

#### Parameters

|  |  |
| --- | --- |
| Name | Value |
| Confirmation | A confirmation receipt or error may be returned to the invoker based on the outcome of the MintTo request. |

### Properties

#### Name: Role

Value Description: A group or list an account can be a member or be in.

Template Value: Minters

### Invocations

#### GetMinters

Id:

Description: Request the the list of member accounts in the 'Minters' role.

##### Request

Control Message: GetMintersRequest

Description: The request

###### Parameters

|  |  |
| --- | --- |
| Name | Value |

##### Response

Control Message: GetMintersResponse

Description: The response

###### Parameters

|  |  |
| --- | --- |
| Name | Value |
| Members | Returning the list of accounts in the 'Minters' role. |

#### AddRoleMember

Id: 600357f8-0499-47f8-87a5-eedf4ad034af

Description: Add a member to the group or role property.

##### Request

Control Message: AddRoleMemberRequest

Description: The request

###### Parameters

|  |  |
| --- | --- |
| Name | Value |
| RoleName | Value is always set to 'Minters' |
| AccountAddress | Address, name or identifier of the account to be added to the 'Minters' role. |

##### Response

Control Message: AddRoleMemberResponse

Description: The response

###### Parameters

|  |  |
| --- | --- |
| Name | Value |
| Added | True or False. |

#### RemoveRoleMember

Id: 97e160bb-6c60-4f1d-923b-813b07b89638

Description: Remove a member to the group or role property.

##### Request

Control Message: RemoveRoleMemberRequest

Description: The request

###### Parameters

|  |  |
| --- | --- |
| Name | Value |
| RoleName | Always set to 'Minters' |
| AccountAddress | Address, name or identifier of the account to be removed from the role. |

##### Response

Control Message: RemoveRoleMemberResponse

Description: The response

###### Parameters

|  |  |
| --- | --- |
| Name | Value |
| Added | True or False. |

#### IsInRole

Id: e42b1b16-074a-4d7d-b9f9-f69a2397a21b

Description: Check to see if an account is in the role.

##### Request

Control Message: IsInRoleRequest

Description: The request may be internal only and not exposed externally.

###### Parameters

|  |  |
| --- | --- |
| Name | Value |
| RoleName | Always be bound to 'Minters' |
| AccountAddress | Address, name or identifier of the account to be checked. |

##### Response

Control Message: IsInRoleRequestResponse

Description: The response

###### Parameters

|  |  |
| --- | --- |
| Name | Value |
| InRole | True or False. |

### Properties