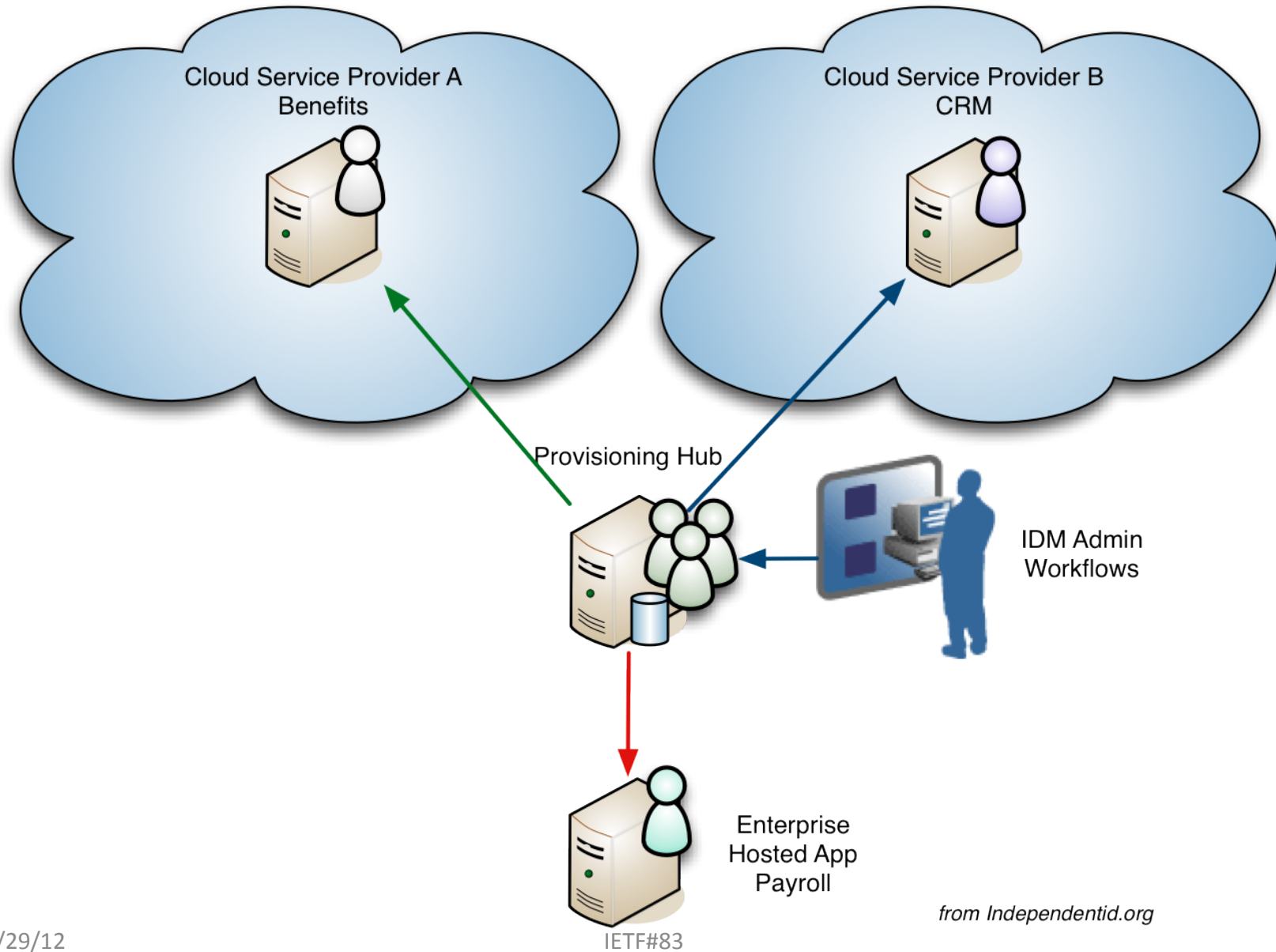


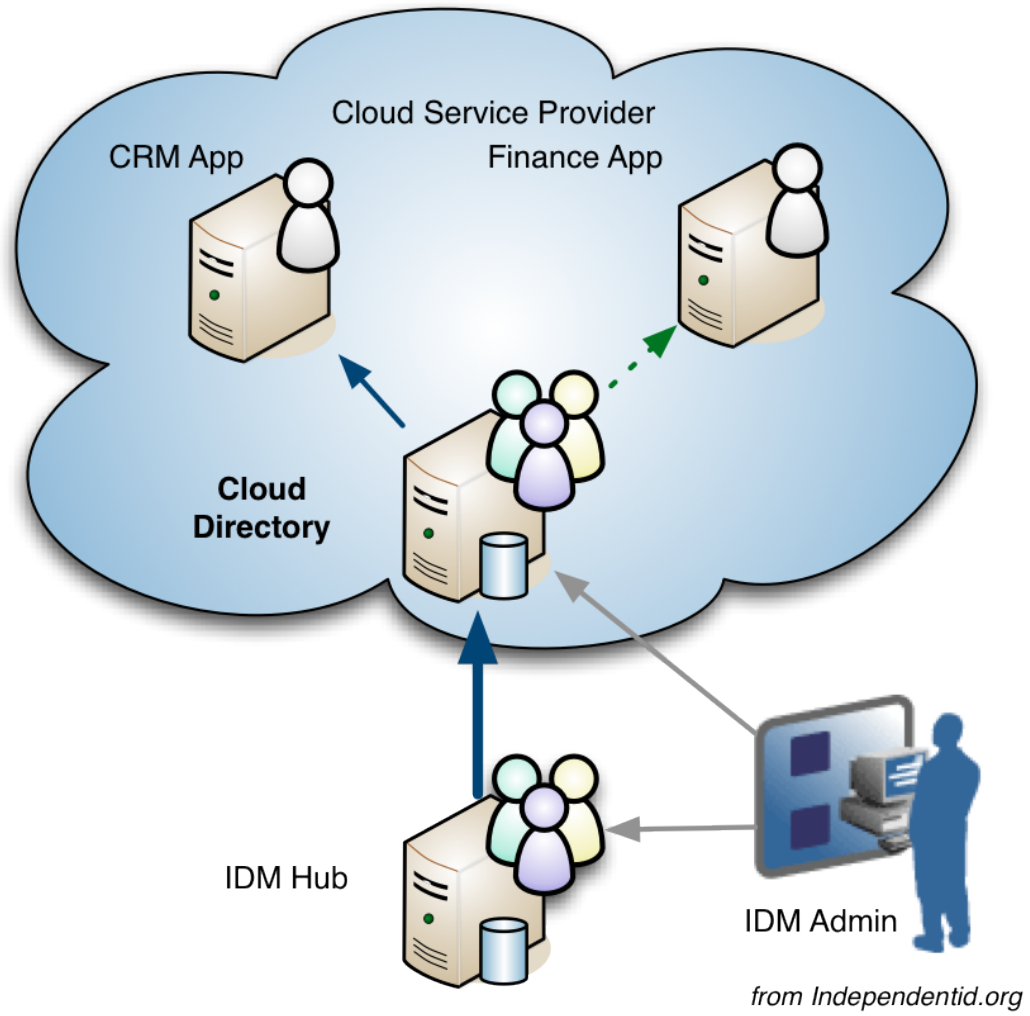
What is Targeting

- Enables the ability to explicitly route SCIM operations to specific applications via a common gateway or hub
 - Currently handled indirectly via URLs or schema extensions
- Defined as extension to SCIM 1.0
- Schema extensions to link accounts between targets
- Draft available: draft-hunt-scim-targeting-00

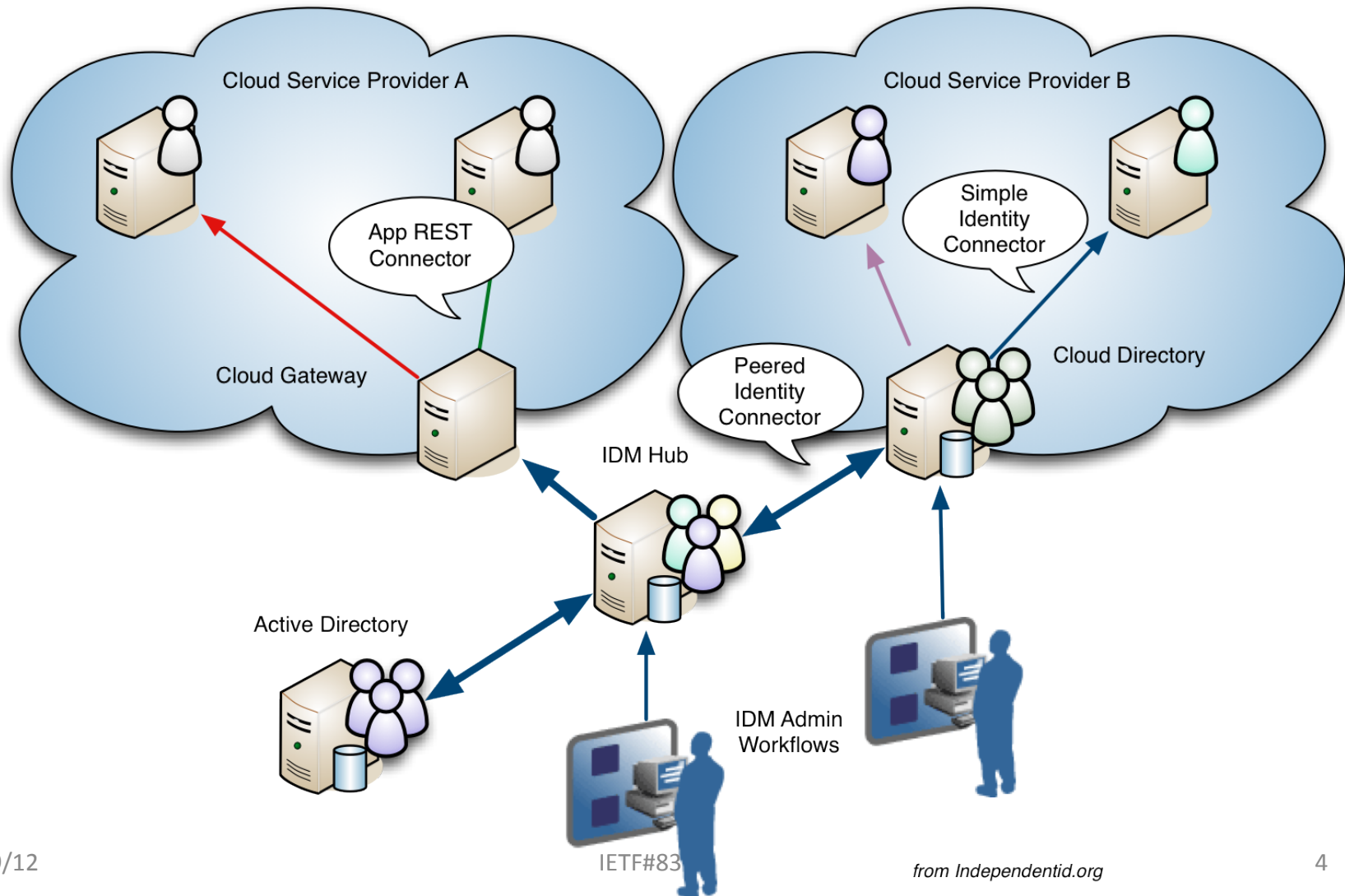
Simple Hub-Spoke Provisioning



Directory Provisioning



Extended SCIM Topology



SCIM Hub

- Important for directory-centric (single-silo) Cloud Providers
- May support different application types
 - directory-centric: apps implicitly provisioned by presence of entry in central directory/repository
 - apps provisioned by SCIM
 - protocol conversion (to App connectors)
- May provide identity administration
- May act as provisioning firewall to applications

Targeting Spec Summary

- Defines
 - New Target Resources
 - Logically defines apps that may be provisioned
 - New explicit “target” routing
 - Currently handled implicitly via
 - domain names in end-points
 - site specific schema additions
 - » E.g. presence of uidNumber,gidNumber -> NIS Account
 - User extensions
 - accountRef – stores links to associated User accounts in specific Targets
- 100% backwards compatible
 - simplecloud.info SCIM 1 is just a “spoke”

Basic Targeting

`/Targets/{target_id}/{scim-endpoint-url}`

- Routes an operation at a specific target identified by `{target_id}`.
- `{scim-endpoint-url}` any valid SCIM 1.0 relative
- **Example:**

`/Targets/crm/Users/2819c223-7f76-453a-919d-413861904646`

`/Targets/crm/Groups/00300000005N2Y6AA`

`/Targets/crm/ServerProviderConfigs`

`/Targets/crm/Schemas`

Other Target Operations

- /Targets/
 - Returns available target identifiers
- /Targets/{target_id}
 - Returns information about {target_id}
- /Targets/{target_id}/ServiceProviderConfigs
 - Returns configuration information about {target_id}
- /Targets/{target_id}/Schemas
 - Returns schema information about {target_id}

Targeting Entity Changes

- /ServiceProviderConfig [extended]
 - Normal config +
 - Spoke vs Proxy vs Hub
- /Targets/{target_id} [new]
 - target identifier
 - tenancy id – one tenancy per target
 - discovery information e.g. OAuth?
- /Users/{object_id}
 - New accountRefs complex attribute

User with Targeted Refs

```
"id": "2819c223-7f76-453a-919d-413861904646",
"userName": "bjensen@example.com"
. . .
"urn:scim:schemas:extensions:targeted:1.0":{
  "accountRefs": [
    {
      "targetId": "mail"
      "Display": "Cloud Email Service"
      "references": [
        {"type": "User", "value": bjensen@example.com, "primary": true},
        {"type": "User", "value": "b.jensen@example.com"}
      ]
    },
    {
      "targetId": "crm"
      "Display": "Customer Relationship Management Service"
      "references":
      [
        {"type": "User", "value": "2819c223-7f76-453a-919d-413861904646"}
      ]
    }
  ]
}
3/29/12 }
```

Extended ServerProviderConfig

```
{
  "schemas": ["urn:scim:schemas:core:1.0", "urn:scim:schemas:extensions:targeted:1.0"],
  "documentationUrl": "http://example.com/help/scim.html",
  "patch": {
    "supported": true
  },
  "bulk": {
    "supported": true,
    "maxOperations": 1000,
    "maxPayloadSize": 1048576
  },
  "filter": {
    "supported": true,
    "maxResults": 200
  },
  . . .
  "urn:scim:schemas:extensions:targeted:1.0": [
    {
      "type": "hub"
    }
  ]
}
```

Targets Object

```
{  
  "schemas":  
    [  
      "urn:scim:schemas:core:1.0",  
      "urn:scim:extensions:targeted:1.0"  
    ],  
  "id" : "mail",  
  "type" : "spoke"  
  "description" : "SMTP/IMAP Email service"  
  << Other info TBD >>  
}
```

Discussion

- Thank you!