Authentication nodes

December 3, 2025

ADVANCED IDENTITY CLOUD

Table of Contents

Utility nodes

Basic nodes

Data Store Decision node

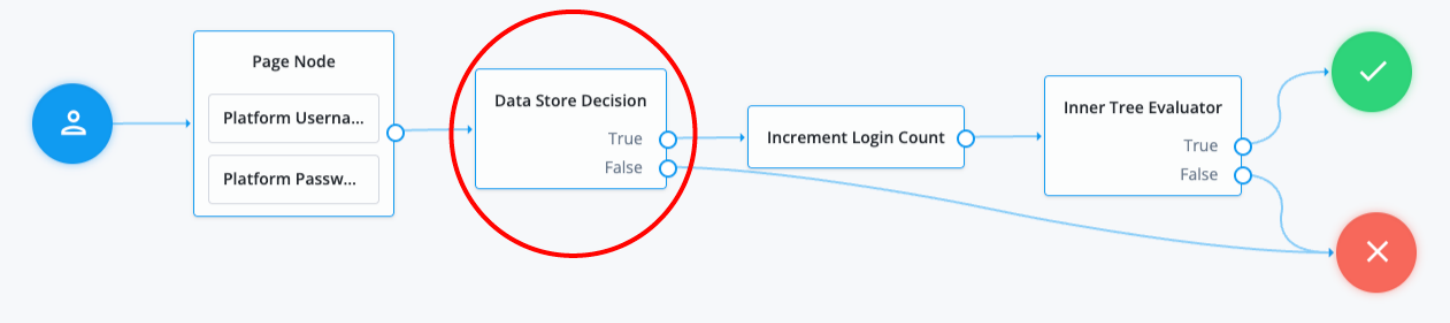
The **Data Store Decision** node checks that the credentials provided during authentication match the ones stored in the configured data store for the realm.

The following are alternate nodes that you can use in your journeys depending on your specific use cases:

- The LDAP Decision node supports LDAP Behera Password Policies with separate outcomes for accounts that are locked and passwords that have expired.
- The Identity Store Decision node is an enhanced node with additional outcomes. Use this node if your authentication journey needs more functionality than a simple `True` or `False` outcome.

Examples

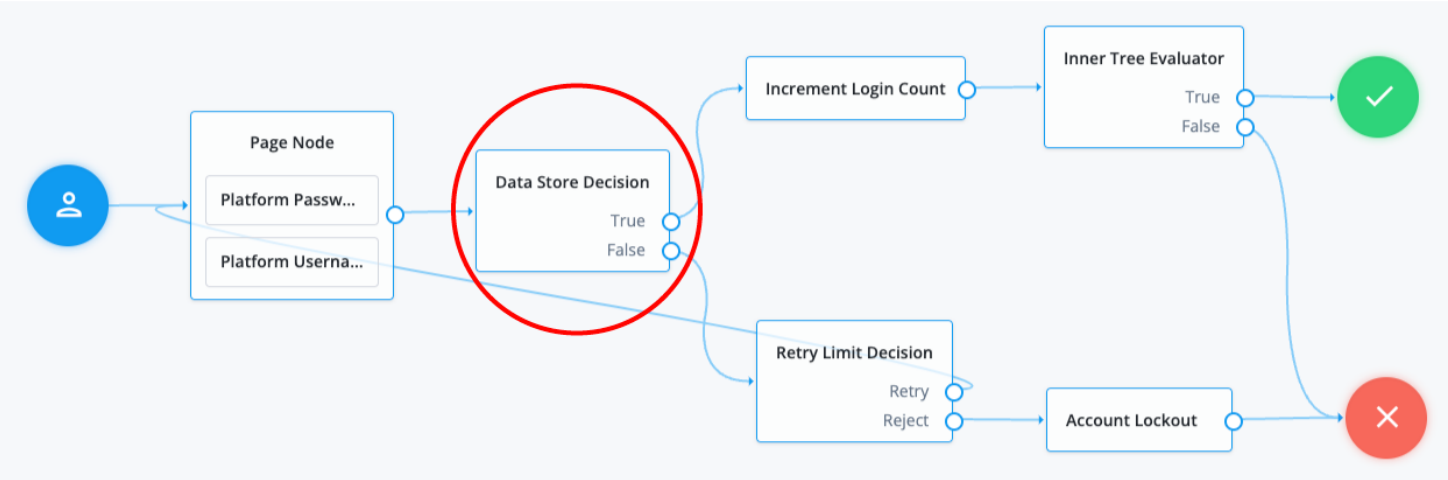
Example 1: Simple username and password collector nodes with Data Store Decision node



This example illustrates a simple login process. The journey involves a Page node that contains two embedded nodes: Platform Username node and Platform Password node. To enhance user experience, the Page node lets users input their username and password on a single page, instead of splitting them across two different pages.

The Data Store Decision node has two outcomes: `True` or `False`. When the outcome is `True`, it triggers a Login Count Decision node. The Increment Login Count node then moves to an Inner Tree Evaluator node, which performs additional login processes. The `False` outcome connects directly to a failure node, indicating a failed state where the username and/or password provided by the user did not match the information stored in the data store.

Example 2: Grant the user several attempts to enter their credentials correctly



In the following example, when an authentication attempt fails at the Data Store Decision node, you can direct it to a Retry Limit Decision node. The Retry Limit Decision node determines the number of retries allowed and either retries the login attempt or rejects it. If the journey rejects the login attempt after reaching the configured limit, for example three attempts, the operation results in an account lockout.

Availability

Product	Available?
PingOne Advanced Identity Cloud	Yes
PingAM (self-managed)	Yes
Ping Identity Platform (self-managed)	Yes

Inputs

This node requires the `realm`, `username`, and `password` properties in the incoming node state.

Implement a Platform Username node and a Platform Password node earlier in the journey.

Alternatively, implement a Zero Page Login Collector node.

Dependencies

The Data Store Decision node is a basic node used in many authentication application types, such as basic, push, OAuth 2.0, and social provider authentication applications.

Configuration

This node has no configurable properties.

Outputs

This node copies shared and transient state into the outgoing node state.

Outcomes

Returns a boolean outcome:

`True`

The credentials match those found in the data store.

`False`

The credentials don't match those found in the data store.

Errors

The following Data Store Decision node warnings and errors can appear in the logs:

Warnings

- "invalid password error"
- "invalid username error"

Errors

- "Exception in data store decision node"

Kerberos node

Not supported in Advanced Identity Cloud

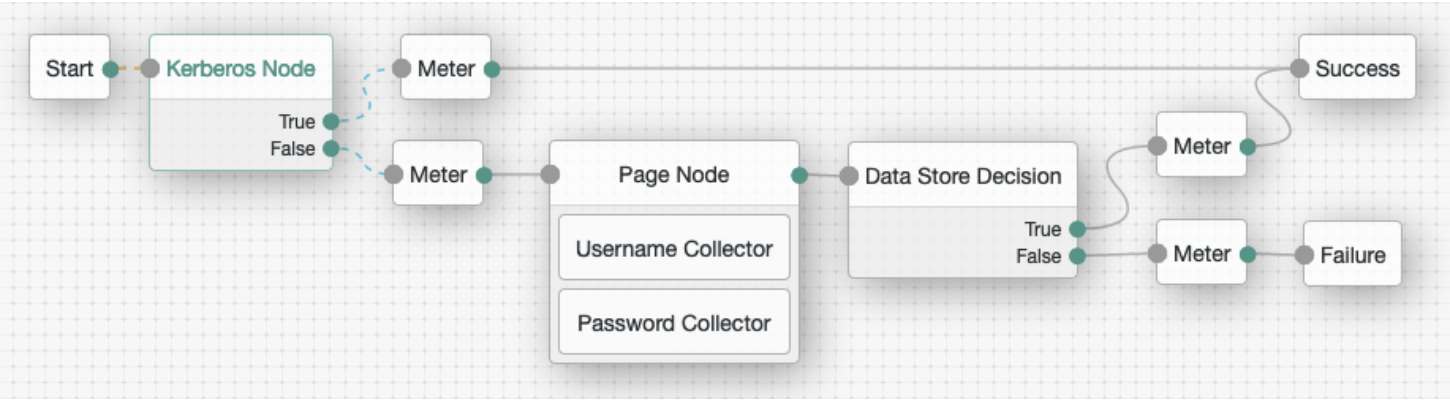
Enables desktop single sign-on such that a user who has already authenticated with a Kerberos Key Distribution Center can authenticate to AM without having to provide the login information again.

To achieve this, the user presents a Kerberos token to AM through the Simple and Protected GSS-API Negotiation Mechanism (SPNEGO) protocol.

End users may need to set up Integrated Windows Authentication in Microsoft Edge to benefit from single sign-on when logged on to a Windows desktop.

Example

This flow attempts to authenticate the user with Windows Desktop SSO. If unsuccessful, AM requests the username and password for login. Meter nodes are used to track metrics for the various paths through the flow:



Availability

Product	Available?
PingOne Advanced Identity Cloud	No
PingAM (self-managed)	Yes
Ping Identity Platform (self-managed)	Yes

Outcomes

- `True`
- `False`

Evaluation continues along the `True` path if Windows Desktop SSO is successful; otherwise, evaluation continues along the `False` path.

Configuration

Property	Usage
Service Principal	Specifies the Kerberos principal for authentication in the format `HTTP/AM-DOMAIN@AD-DOMAIN`, where *AM-DOMAIN* corresponds to the host and domain names of the AM instance, and *AD-DOMAIN* is the domain name of the Kerberos realm (the FQDN of the Active Directory domain). *AD-DOMAIN* can differ from the domain name for AM. In multi-instance AM deployments, configure *AM-DOMAIN* as the FQDN or IP address of the load balancer in front of the AM instances. For example, `HTTP/AM-LB.example.com@KERBEROSREALM.INTERNAL.COM`.

Property	Usage
Key Tab File Path	Specifies the full, absolute path of the keytab file for the specified Service Principal. **Tip** You generate the keytab file using the Windows `ktpass` utility. For example: `C:\> ktpass -out fileName.keytab -princ HTTP/am.example.com@AD_DOMAIN.COM -pass +rdnPass -maxPass 256 -mapuser amKerberos@frdpcloud.com -crypto AES256-SHA1 -ptype KRB5_NT_PRINCIPAL -kvno 0`
Kerberos Realm	Specifies the name of the Kerberos (Active Directory) realm used for authentication. Must be specified in ALL CAPS.
Kerberos Server Name	Specifies the fully qualified domain name, or IP address of the Kerberos (Active Directory) server.
Trusted Kerberos realms	Specifies a list of trusted Kerberos realms for user Kerberos tickets. If realms are configured, then Kerberos tickets are only accepted if the realm part of the user principal name of the user's Kerberos ticket matches a realm from the list. Each trusted Kerberos realm must be specified in all caps.
Return Principal with Domain Name	When enabled, AM returns the fully qualified name of the authenticated user rather than just the username.
Lookup User In Realm	Validates the user against the configured data stores. If the user from the Kerberos token is not found, evaluation continues along the `False` path. This search uses the `Alias Search Attribute Name` from the core realm attributes. Find more information about this property in Core authentication attributes > User profile.
Is Initiator	When enabled (`true`), specifies that the node is using *initiator* credentials, which is the default. When disabled (`false`), specifies that the node is using *acceptor* credentials.

LDAP Decision node

The **LDAP Decision** node verifies that the provided username and password exist in the specified LDAP user data store. The node also checks whether the associated user account has expired or is locked out.

Availability

Product	Available?
PingOne Advanced Identity Cloud	Yes
PingAM (self-managed)	Yes
Ping Identity Platform (self-managed)	Yes

Inputs

The node reads the `username` and `password` fields from the node state.

Implement a Platform Username node and a Platform Password node earlier in the journey.

Alternatively, implement a Zero Page Login Collector node.

Dependencies

None.

Configuration

Property	Usage
Primary LDAP Server *(required)*	Specify one or more primary directory servers. Specify each directory server in the following format: `host:port`. For example, `directory_services.example.com:389`.
Secondary LDAP Server	Specify one or more secondary directory servers. Specify each directory server in the following format: `host:port`. The journey uses the secondary servers when none of the primary servers are available. For example, `directory_services_backup.example.com:389`.
DN to Start User Search *(required)*	Specify the DN from which to start the user search. More specific DNs, such as `ou=sales,dc=example,dc=com`, result in better search performance. If multiple entries with the same attribute values exist in the directory server, make sure this property is specific enough to return only one entry.
Bind User DN, **Bind User Password**	The credentials used to connect to the LDAP user data store.
Attribute Used to Retrieve User Profile *(required)*	The attribute used to retrieve a user profile from the directory server. The user search will have already happened, as specified by the **Attributes Used to Search for a User to be Authenticated** and **User Search Filter** properties.

Property	Usage
Attributes Used to Search for a User to be Authenticated *(required)*	The attributes the node uses to match the credentials provided by the user to an entry in the directory server. For example, a value of `uid` forms the search filter `uid=user`. If you specify multiple values, such as `uid` and `cn`, the node forms a complex search filter `(|(uid=user)(cn=user))`. Multiple attribute values let the user authenticate with any one of the values. For example, if you set both `uid` and `mail`, then Barbara Jensen can authenticate with either `bjensen` or `bjensen@example.com`. **Note** If you're using account lockout and you set multiple attribute values here, you must add those attributes to the `Alias Search Attribute Name` property in the User profile. Find more information about this property in Core authentication attributes > User profile.
User Search Filter	A filter to append to user searches. For example, if your search attribute is `mail` and you set **User Search Filter** to `(objectClass=inetOrgPerson)`, the node uses `(&(mail=address)(objectClass=inetOrgPerson))` as the resulting search filter. In this example, *address* is the mail address provided by the user.
Search Scope	The extent of the search for users in the directory server: • `OBJECT`: The search extends only to the entry specified by the **DN to Start User Search**. • `ONELEVEL`: The search extends to the entries that are direct children of the **DN to Start User Search**. • `SUBTREE`: The search extends to the **DN to Start User Search** and every entry under it. Default: `SUBTREE`
LDAP Connection Mode	Specifies whether to use SSL or StartTLS to connect to the directory server. The node must be able to trust the certificates used. Possible values: `LDAP`, `LDAPS`, and `StartTLS` Default: `LDAP`

Property	Usage
mTLS Enabled	Enables mTLS (mutual TLS) between Advanced Identity Cloud and the directory server. This setting applies to *all* configured LDAP servers; that is, Advanced Identity Cloud uses mTLS to authenticate to all LDAP servers configured for this node. When mTLS is enabled, Advanced Identity Cloud ignores the values for **Bind User DN** and **Bind User Password**. If you enable this property, you must: • Set the **LDAP Connection Mode** to `LDAPS` • Provide an **mTLS Secret Label Identifier** Default: Disabled
mTLS Secret Label Identifier	Identifier used to create a secret label for mapping to the mTLS certificate in the secret store. Advanced Identity Cloud uses this identifier to create a specific secret label for this node. The secret label takes the form `am.authentication.nodes.ldap.decision.mtls.identifier.cert`, where `identifier` is the value of **mTLS Secret Label Identifier**. The identifier can only contain alphanumeric characters (`a-z`, `A-Z`, `0-9`) and periods (`.`). It can't start or end with a period. All LDAP servers configured for this node share the same secret label. For more security, you should rotate certificates periodically. When you rotate a certificate, update the corresponding mapping in the realm secret store configuration to reflect this label. When you rotate a certificate, Advanced Identity Cloud closes any existing connections using the old certificate. A new connection is selected from the connection pool and no server restart is required.
Return User DN to DataStore	When enabled, the node returns the DN rather than the User ID. From the DN value, Advanced Identity Cloud uses the RDN to search for the user profile. For example, if a returned DN value is `uid=demo,ou=people,dc=example,dc=com`, Advanced Identity Cloud uses `uid=demo` to search the directory server. Default: Enabled
User Creation Attributes	This list lets you map (external) attribute names from the LDAP directory server to (internal) attribute names used by Advanced Identity Cloud.
Minimum Password Length	The minimum acceptable password length. Default: `8`
LDAP Behera Password Policy Support	When enabled, support interoperability with servers that implement the Internet-Draft, Password Policy for LDAP Directories. Default: Enabled
Trust All Server Certificates	When enabled, the server blindly trusts server certificates, including self-signed test certificates. Default: Disabled

Property	Usage
LDAP Connection Heartbeat Interval	Specifies how often Advanced Identity Cloud should send a heartbeat request to the directory server to ensure that the connection doesn't remain idle. Some network administrators configure firewalls and load balancers to drop connections that are idle for too long. Set the units for the interval in the `LDAP Connection Heartbeat Time Unit` property. **Note** Setting this property to `0` does *not* disable the heartbeat (keepalive) or load balancer availability checks. Default: `10`
LDAP Connection Heartbeat Time Unit	The time unit for the `LDAP Connection Heartbeat Interval`. Default: `seconds`
LDAP Operations Timeout	The timeout, in seconds, that Advanced Identity Cloud should wait for a response from the directory server. Default: `0` (means no timeout)
Use mixed case for password change messages	Specifies whether the server returns password change messages in mixed (sentence) case or transforms them to uppercase. By default, the server transforms password reset and password change messages to uppercase. Enable this setting to return messages in sentence case. Default: Disabled
LDAP Affinity Level	Level of affinity used to balance requests across LDAP servers. Affinity-based load balancing means that each request for the same user entry goes to the same DS server. The DS server used for a specific operation is determined by the DN of the identity involved. List the directory server instances that form part of the affinity deployment in the **Primary LDAP Server** and **Secondary LDAP Server** properties. Options are: • `NONE` – no affinity • `BIND` – affinity for BIND requests only • `ALL` – affinity for all requests Default: `NONE`

Outcomes

`True`

The provided credentials match those found in the LDAP user data store.

`False`

The provided credentials don't match those found in the LDAP user data store.

`Locked`

The profile associated with the provided credentials is locked.

`Cancelled`

The user must change their password. When the journey prompts the user to change their password, the user cancels the password change.

`Expired`

The profile is found, but the password has expired.

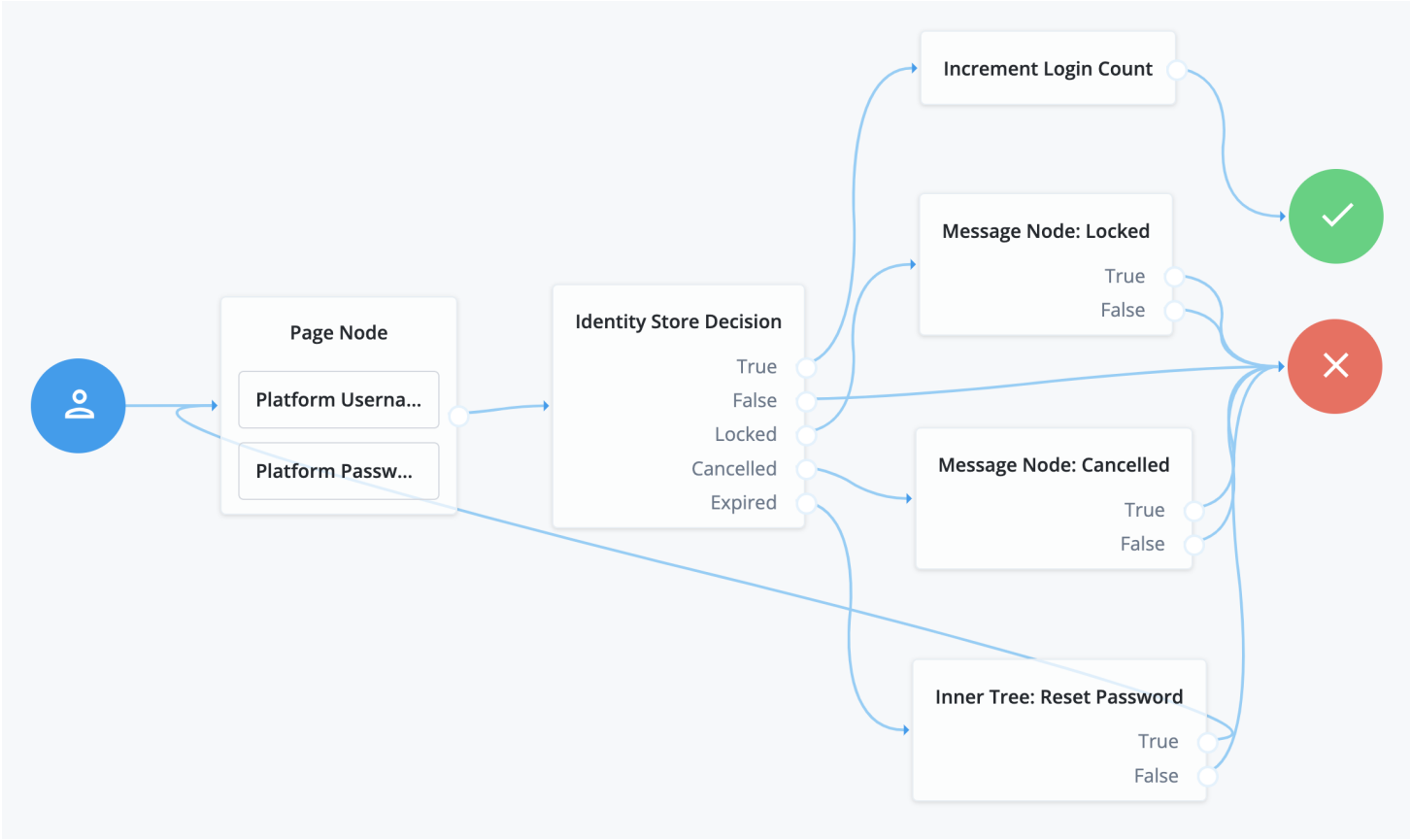
Identity Store Decision node

The **Identity Store Decision** node attempts to match the provided username and password with the credentials stored in the identity store.

If the credentials exist, the node checks the following:

- Is the profile locked?
- Has the provided password expired?
- Has the user cancelled a password reset?

Example



This example illustrates a simple login process.

- A Page node with the embedded nodes (Platform Username node and Platform Password node) prompts the user for their credentials.
- The Identity Store Decision node assesses the credentials:
  - If it finds the credentials in the data store and the credentials are valid, the journey follows the `True` outcome. An Increment Login Count node increments the login count and the user is authenticated.
  - If the credentials don't exist in the data store, the journey follows the `False` outcome and authentication fails.
  - If the credentials exist in the data store but the account is locked, the journey follows the `Locked` outcome. A Message node displays a custom lockout message and authentication fails.
  - If the credentials exist in the data store but the user must change their password, the node prompts the user to change their password. If the user cancels this change request, the journey follows the `Cancelled` outcome. A Message node displays a custom message and authentication fails.
  - If the credentials exist in the data store but the password has expired, the node follows the `Expired` outcome. The user is routed to an inner tree journey that contains the password reset logic and then routes the user to the start of the journey to authenticate again.

Alternative nodes

- The Data Store Decision node is a simpler node with only two outcomes, `True` and `False`. Use this node if the flow only requires these outcomes.

Availability

Product	Available?
PingOne Advanced Identity Cloud	Yes
PingAM (self-managed)	No
Ping Identity Platform (self-managed)	No

Inputs

The node reads the `username` and `password` fields from the node state.

The journey can provide these credentials in a number of ways, for example, with a combination of the Platform Username node and Platform Password node, or by using the Zero Page Login Collector node.

Dependencies

None

Configuration

Property	Usage
Minimum Password Length	For password change requests, the node rejects passwords that are shorter than this value. If you set this value to `0`, the node doesn't check the password length. Default: `8`
Username as Universal Identifier	If you enable this property, the `username` property is set to the value of the `uuid`. For example, `"username": "c636b756-ba6b-481d-ab4a-ab8c064cb24b"`. If this property is false, the value of the `username` property remains unchanged. For example, `"username": "bjensen"`. Default: false
Use mixed case for password change messages	Return password change messages in mixed (sentence) case. By default password reset and password change messages are transformed to upper case. Enable this option to return messages in sentence case. Default: Disabled

Outputs

This node copies shared and transient state into the outgoing node state.

Outcomes

`True`

The credentials match those found in the identity store.

`False`

The credentials don't match those found in the identity store.

`Locked`

The profile associated with the provided credentials is locked.

`Cancelled`

The user cancelled a password change request. The example provides a detailed explanation of this outcome.

`Expired`

The credentials match those found in the identity store, but the password has expired.

Password Collector node

Not supported in Advanced Identity Cloud

Prompts the user to enter their password.

The captured password is transient, persisting only until the authentication flow reaches the next node requiring user interaction.

Availability

Product	Available?
PingOne Advanced Identity Cloud	No
PingAM (self-managed)	Yes
Ping Identity Platform (self-managed)	No

Outcomes

Single outcome path.

Evaluation continues after capturing the password.

Configuration

This node has no configurable properties.

Username Collector node

Not supported in Advanced Identity Cloud

Prompts the user to enter their username.

Availability

Product	Available?
PingOne Advanced Identity Cloud	No
PingAM (self-managed)	Yes
Ping Identity Platform (self-managed)	No

Outcomes

Single outcome path.

Evaluation continues after capturing the username.

Configuration

This node has no configurable properties.