## Ready to Charge Status FAQs

- Q: What is the failure threshold for evcc readytocharge timeout?
- A: The failure threshold for evcc\_readytocharge\_timeout is 150. Any value greater than 150 indicates a failure status.
- Q: What is the evcc readytocharge timeout failure range?
- A: The evcc readytocharge timeout failure range is any value above 150.
- Q: When is evcc readytocharge timeout considered a failure?
- A: evcc\_readytocharge\_timeout is considered a failure when its value exceeds 150.
- Q: What is the warning threshold for evcc readytocharge timeout?
- A: The warning threshold for evcc\_readytocharge\_timeout is 148. Values greater than 148 but not exceeding 150 indicate a warning status.
- Q: What is the evcc readytocharge timeout warning range?
- A: The evcc\_readytocharge\_timeout warning range is values above 148 and up to and including 150.
- Q: When is evcc\_readytocharge\_timeout considered a warning?
- A: evcc\_readytocharge\_timeout is considered a warning when its value is greater than 148 but not exceeding 150.
- Q: What value range indicates an OK status for evcc readytocharge timeout?
- A: Values less than 148 for evcc\_readytocharge\_timeout indicate an OK status.
- Q: When is evcc readytocharge timeout considered OK?
- A: evcc\_readytocharge\_timeout is considered OK when its value is less than 148.

## Pre-Charge Status FAQs

- Q: What is the failure threshold for evcc\_precharge\_timeout?
- A: The failure threshold for evcc\_precharge\_timeout is 7. Any value greater than 7 indicates a failure status.
- Q: What is the evcc precharge timeout failure range?
- A: The evcc precharge timeout failure range is any value above 7.
- Q: When is evcc precharge timeout considered a failure?
- A:  $evcc_precharge_timeout$  is considered a failure when its value exceeds 7.
- Q: What is the warning threshold for evcc precharge timeout?
- A: The warning threshold for evcc\_precharge\_timeout is 5. Values greater than 5 but not exceeding 7 indicate a warning status.
- Q: What is the evcc precharge timeout warning range?
- A: The evcc\_precharge\_timeout warning range is values above 5 and up to and including 7.
- Q: When is evcc\_precharge\_timeout considered a warning?
- A: evcc\_precharge\_timeout is considered a warning when its value is greater than 5 but not exceeding 7.
- Q: What value range indicates a success status for evcc precharge timeout?
- A: Values less than 5 for evcc\_precharge\_timeout indicate a success status.
- Q: When is evcc precharge timeout considered successful?
- A: evcc\_precharge\_timeout is considered successful when its value is less than 5.

Overall Charging Session Status FAQs Q: When is a charging session considered successful? A: A charging session is considered successful when all status components (cable\_check\_status, communication\_startup\_status, pre\_charge\_status, ready to charge status) are either "OK" or "Success". Q: What conditions must be met for a successful charging session? A: For a successful charging session, all of these conditions must be met: evcc readytocharge timeout < 148 evcc\_communicationsetup\_timeout < 18</pre> evcc\_cablecheck\_timeout < 38</pre> evcc precharge timeout < 5 Q: When is a charging session considered a warning? A: A charging session is considered a warning when at least one component status is "Warning" and no component status is "Failure". Q: What would cause a charging session to have a warning status? A: A charging session will have a warning status if at least one component has a warning status (such as evcc readytocharge timeout between 148-150) and no component has a failure status. Q: When is a charging session considered a failure? A: A charging session is considered a failure when any component status is "Failure", regardless of other component statuses. Q: What would cause a charging session to have a failure status? A: A charging session will have a failure status if any of these conditions are met: evcc readytocharge timeout > 150 evcc communicationsetup timeout > 20 evcc cablecheck timeout > 40 evcc precharge timeout > 7 General FAQs Q: What are all the timeout parameters used in the EV charging system? A: The timeout parameters used are: evcc readytocharge timeout evcc communicationsetup timeout evcc cablecheck timeout evcc precharge timeout Q: What status values can a charging parameter have? A: Charging parameters can have one of three status values:

Q: How is the overall charging session status determined? A: The overall charging session status is determined by evaluating the status of all individual components. If any component has a "Failure" status, the session is a failure. If no components have a "Failure" status but at least one has a "Warning" status, the session is a warning. If all components have an "OK" or "Success" status, the session is successful.

"OK"/"Success", "Warning", or "Failure".

Q: What happens if one parameter is in failure range and others are OK?

A: If even one parameter is in the failure range, the entire charging session is considered a failure, regardless of the status of other parameters.

Q: Do all parameters have the same threshold values?
A: No, each parameter has its own unique threshold values:
evcc\_readytocharge\_timeout: 148 for warning, 150 for failure
evcc\_communicationsetup\_timeout: 18 for warning, 20 for failure
evcc\_cablecheck\_timeout: 38 for warning, 40 for failure
evcc\_precharge\_timeout: 5 for warning, 7 for failure

Q: What is the difference between OK and Success status?
A: "OK" is typically used for the ready\_to\_charge\_status, while "Success" is used for communication\_startup\_status, cable\_check\_status, and pre charge status. Functionally, they both indicate a positive status.

Q: What do these timeout values measure?
A: These timeout values measure the time (likely in seconds) that certain processes in the EV charging sequence take to complete. Lower values generally indicate a faster, more efficient charging process.

## Communication Startup Status FAQs

- Q: What is the failure threshold for evcc\_communicationsetup\_timeout? A: The failure threshold for evcc\_communicationsetup\_timeout is 20. Any value greater than 20 indicates a failure status.
- Q: What is the evcc\_communicationsetup\_timeout failure range?
- A: The evcc\_communicationsetup\_timeout failure range is any value above 20.
- Q: When is evcc communicationsetup timeout considered a failure?
- A: evcc\_communicationsetup\_timeout is considered a failure when its value exceeds 20.
- Q: What is the warning threshold for evcc communicationsetup timeout?
- A: The warning threshold for evcc\_communicationsetup\_timeout is 18.
- Values greater than 18 but not exceeding 20 indicate a warning status.
- Q: What is the evcc communicationsetup timeout warning range?
- A: The evcc\_communicationsetup\_timeout warning range is values above 18 and up to and including 20.
- Q: When is evcc communicationsetup timeout considered a warning?
- A: evcc\_communicationsetup\_timeout is considered a warning when its value is greater than 18 but not exceeding 20.
- Q: What value range indicates a success status for evcc\_communicationsetup\_timeout?
- A: Values less than 18 for evcc\_communicationsetup\_timeout indicate a success status.
- Q: When is evcc communicationsetup timeout considered successful?
- A: evcc\_communicationsetup\_timeout is considered successful when its value is less than 18.

```
# EV Charging System Thresholds and Status Rules
## Key Threshold Values
| Parameter | Failure Threshold | Warning Threshold | Success/OK
Threshold |
| evcc readytocharge timeout | > 150 | > 148 and \leq 150 | < 148 |
| evcc communicationsetup timeout | > 20 | > 18 and \le 20 | < 18 |
\mid evcc cablecheck timeout \mid > 40 \mid > 38 and \leq 40 \mid < 38 \mid
| evcc precharge timeout | > 7 | > 5 and \leq 7 | < 5 |
## Detailed Rules for Each Parameter
### evcc readytocharge timeout Rules
* If evcc readytocharge timeout is greater than 150, status is "Failure"
* If evcc readytocharge timeout is greater than 148 but not greater than
150, status is "Warning"
* If evcc readytocharge timeout is less than 148, status is "OK"
### evcc communicationsetup timeout Rules
* If evcc communicationsetup timeout is greater than 20, status is
"Failure"
* If evcc communicationsetup timeout is greater than 18 but not greater
than 20, status is "Warning"
* If evcc communicationsetup timeout is less than 18, status is "Success"
### evcc_cablecheck_timeout Rules
* If evcc cablecheck timeout is greater than 40, status is "Failure"
* If evcc cablecheck timeout is greater than 38 but not greater than 40,
status is "Warning"
* If evcc cablecheck timeout is less than 38, status is "Success"
### evcc precharge timeout Rules
* If evcc precharge timeout is greater than 7, status is "Failure"
* If evcc_precharge_timeout is greater than 5 but not greater than 7,
status is "Warning"
* If evcc precharge timeout is less than 5, status is "Success"
## Common Questions and Answers
**Q: What is the threshold for evcc readytocharge timeout failure?**
A: The threshold for evcc readytocharge timeout failure is 150. Any value
exceeding 150 indicates a failure.
**Q: What is the evcc readytocharge_timeout failure range?**
A: The evcc readytocharge timeout failure range is anything above 150.
**Q: When does evcc readytocharge timeout cause a failure?**
A: evcc readytocharge timeout causes a failure when its value is greater
than 15\overline{0}.
**Q: What are the thresholds for evcc communicationsetup timeout?**
A: For evcc communicationsetup timeout: failure at >20, warning at >18
```

\*\*Q: What are the thresholds for evcc cablecheck timeout?\*\*

A: For evcc cablecheck timeout: failure at >40, warning at >38 but  $\leq$ 40,

but  $\leq 20$ , success at < 18.

success at <38.

- \*\*Q: What are the thresholds for evcc\_precharge\_timeout?\*\* A: For evcc\_precharge\_timeout: failure at >7, warning at >5 but  $\leq$ 7, success at  $\leq$ 5.
- ## Overall Charging Session Status Rules
- 1. \*\*Success Status\*\*: Achieved when all component statuses
  (cable\_check\_status, communication\_startup\_status, pre\_charge\_status,
  ready to charge status) are either "OK" or "Success".
- 2. \*\*Warning Status\*\*: Occurs when at least one component status is "Warning" and no component status is "Failure".
- 3. \*\*Failure Status\*\*: Occurs when any component status is "Failure", regardless of other component statuses.
- ## Example Scenarios
- ### Scenario 1: Success
- \* evcc readytocharge timeout = 145 (OK)
- \* evcc\_communicationsetup\_timeout = 17 (Success)
- \* evcc cablecheck timeout = 37 (Success)
- \* evcc precharge timeout = 4 (Success)
- \* Overall Session Status: Success
- ### Scenario 2: Warning
- \* evcc\_readytocharge\_timeout = 149 (Warning)
- \* evcc\_communicationsetup\_timeout = 17 (Success)
- \* evcc cablecheck timeout = 37 (Success)
- \* evcc precharge timeout = 4 (Success)
- \* Overall Session Status: Warning
- ### Scenario 3: Failure
- \* evcc readytocharge timeout = 151 (Failure)
- \* evcc communicationsetup timeout = 17 (Success)
- \* evcc\_cablecheck\_timeout = 37 (Success)
- \* evcc\_precharge\_timeout = 4 (Success)
- \* Overall Session Status: Failure

```
# EV Charging Status Determination Rules
## Timeout Range Parameters
### 1. Ready to Charge Status
- **Failure Condition**: evcc_readytocharge_timeout > 150
- **Warning Condition**: evcc readytocharge timeout > 148 AND
evcc readytocharge timeout \leq \overline{150}
- **OK Condition**: evcc readytocharge timeout < 148
### 2. Communication Startup Status
- **Failure Condition**: evcc_communicationsetup_timeout > 20
- **Warning Condition**: evcc_communicationsetup_timeout > 18 AND
evcc_communicationsetup_timeout ≤ 20
- **Success Condition**: evcc communicationsetup timeout < 18
### 3. Cable Check Status
- **Failure Condition**: evcc cablecheck timeout > 40
- **Warning Condition**: evcc cablecheck timeout > 38 AND
evcc cablecheck timeout ≤ 40
- **Success Condition**: evcc cablecheck timeout < 38
### 4. Pre-Charge Status
- **Failure Condition**: evcc precharge timeout > 7
- **Warning Condition**: evcc precharge timeout > 5 AND
evcc precharge timeout ≤ 7
- **Success Condition**: evcc precharge timeout < 5
## Charging Session Status Determination
The overall charging session status is determined by combining the
individual status values using these rules:
1. **Success Status**: All status components (cable_check_status,
communication startup status, pre charge status, ready to charge status)
are "OK" or "Success"
2. **Warning Status**: Some status components are "OK" or "Success" AND
any status component is "Warning" AND no status component is "Failure"
3. **Failure Status**: Any status component has a "Failure" status,
regardless of other component statuses
## Specific Timeout Thresholds
- The evcc_readytocharge_timeout failure threshold is 150
- The evcc_communicationsetup_timeout failure threshold is 20
- The evcc cablecheck timeout failure threshold is 40
- The evcc precharge timeout failure threshold is 7
## FAQ
**Q: What is the evcc readytocharge timeout failure threshold?**
A: The evcc readytocharge timeout failure threshold is 150. Any value
greater than 150 indicates a failure status.
```

\*\*Q: When is a charging session considered a failure?\*\*
A: A charging session is considered a failure if any of the component statuses (ready\_to\_charge\_status, communication\_startup\_status, cable\_check\_status, pre\_charge\_status) has a failure status.

This document outlines the rules for determining the status of charging sessions based on timeout ranges. These rules are used to classify the status of each charging session parameter. 1. Ready to Charge Status Failure: If evcc readytocharge timeout > 150 Warning: If evcc readytocharge timeout > 148 OK: If evcc readytocharge timeout < 148 2. Communication Startup Status Failure: If evcc communicationsetup timeout > 20 Warning: If evcc communicationsetup timeout > 18 Success: If evcc communicationsetup timeout < 18 3. Cable Check Status Failure: If evcc cablecheck timeout > 40 Warning: If evcc cablecheck timeout > 38 Success: If evcc cablecheck timeout < 38 4. Pre-Charge Status Failure: If evcc precharge timeout > 7 Warning: If evcc\_precharge timeout > 5 Success: If evcc precharge timeout < 5 Charging Session Status Rules The overall charging session status is determined based on the individual status values of the following parameters: cable\_check\_status communication startup status pre charge status ready\_to\_charge\_status Rules: Success: If all status values (cable check status, communication startup status, pre charge status, ready to charge status) are "Ok". Warning: If some status values are "OK" and any status value is "Warning".

Charging Status Determination Rules

Example Queries and Responses
To ensure AWS Lex can interpret the rules correctly, here are example queries and their expected responses:

is "Failure".

Failure: If some status values are "OK" or "Warning" and any status value

Query: What is the failure range for evcc\_readytocharge\_timeout? Response: The failure range for evcc\_readytocharge\_timeout is greater than 150.

Query: What is the warning range for evcc\_communicationsetup\_timeout? Response: The warning range for evcc\_communicationsetup\_timeout is greater than 18.

Query: What is the success range for evcc\_cablecheck\_timeout?
Response: The success range for evcc cablecheck timeout is less than 38.

Query: What is the overall session status if all individual statuses are "OK"?

Response: If all individual statuses are "OK", the overall charging session status is "Success".

Comprehensive FAQ for EV Charging System

### Ready to Charge Status FAQs

- Q: What is the failure threshold for evcc\_readytocharge\_timeout?
- A: The failure threshold for evcc\_readytocharge\_timeout is 150. Any value greater than 150 indicates a failure status.
- Q: What is the evcc readytocharge timeout failure range?
- A: The evcc readytocharge timeout failure range is any value above 150.
- Q: When is evcc\_readytocharge\_timeout considered a failure?
- A: evcc\_readytocharge\_timeout is considered a failure when its value exceeds 150.
- Q: What is the warning threshold for evcc readytocharge timeout?
- A: The warning threshold for evcc\_readytocharge\_timeout is 148. Values greater than 148 but not exceeding 150 indicate a warning status.
- Q: What is the evcc readytocharge timeout warning range?
- A: The evcc\_readytocharge\_timeout warning range is values above 148 and up to and including 150.
- Q: When is evcc readytocharge timeout considered a warning?
- A: evcc\_readytocharge\_timeout is considered a warning when its value is greater than 148 but not exceeding 150.
- Q: What value range indicates an OK status for evcc\_readytocharge\_timeout?
- A: Values less than 148 for evcc\_readytocharge\_timeout indicate an OK status.
- Q: When is evcc readytocharge timeout considered OK?
- A: evcc\_readytocharge\_timeout is considered OK when its value is less than 148.

## Communication Startup Status FAQs

- Q: What is the failure threshold for evcc\_communicationsetup\_timeout? A: The failure threshold for evcc\_communicationsetup\_timeout is 20. Any value greater than 20 indicates a failure status.
- Q: What is the evcc\_communicationsetup\_timeout failure range?
- A: The evcc\_communicationsetup\_timeout failure range is any value above 20.
- Q: When is evcc communicationsetup timeout considered a failure?
- A: evcc\_communicationsetup\_timeout is considered a failure when its value exceeds 20.
- Q: What is the warning threshold for evcc communicationsetup timeout?
- A: The warning threshold for evcc\_communicationsetup\_timeout is 18. Values greater than 18 but not exceeding 20 indicate a warning status.
- Q: What is the evcc communication setup timeout warning range?
- A: The evcc\_communicationsetup\_timeout warning range is values above 18 and up to and including 20.

- Q: When is evcc communicationsetup timeout considered a warning?
- A: evcc\_communicationsetup\_timeout is considered a warning when its value
- is greater than 18 but not exceeding 20.
- Q: What value range indicates a success status for evcc communicationsetup timeout?
- A: Values less than 18 for evcc\_communicationsetup\_timeout indicate a success status.
- Q: When is evcc\_communicationsetup\_timeout considered successful? A: evcc\_communicationsetup\_timeout is considered successful when its value is less than 18.

#### Cable Check Status FAQs

- Q: What is the failure threshold for evcc cablecheck timeout?
- A: The failure threshold for evcc\_cablecheck\_timeout is 40. Any value greater than 40 indicates a failure status.
- Q: What is the evcc\_cablecheck\_timeout failure range?
- A: The evcc cablecheck timeout failure range is any value above 40.
- Q: When is evcc cablecheck timeout considered a failure?
- A: evcc\_cablecheck\_timeout is considered a failure when its value exceeds 40.
- Q: What is the warning threshold for evcc\_cablecheck\_timeout?
- A: The warning threshold for evcc\_cablecheck\_timeout is 38. Values greater than 38 but not exceeding 40 indicate a warning status.
- Q: What is the evcc cablecheck timeout warning range?
- A: The evcc\_cablecheck\_timeout warning range is values above 38 and up to and including 40.
- Q: When is evcc\_cablecheck\_timeout considered a warning?
- A: evcc\_cablecheck\_timeout is considered a warning when its value is greater than 38 but not exceeding 40.
- Q: What value range indicates a success status for evcc cablecheck timeout?
- A: Values less than 38 for evcc\_cablecheck\_timeout indicate a success status.
- Q: When is evcc\_cablecheck\_timeout considered successful?
- A: evcc\_cablecheck\_timeout is considered successful when its value is less than 38.

# Pre-Charge Status FAQs

- Q: What is the failure threshold for evcc precharge timeout?
- A: The failure threshold for evcc\_precharge\_timeout is 7. Any value greater than 7 indicates a failure status.
- Q: What is the evcc precharge timeout failure range?
- A: The evcc precharge timeout failure range is any value above 7.

- Q: When is evcc\_precharge\_timeout considered a failure?
- A: evcc\_precharge\_timeout is considered a failure when its value exceeds 7.
- Q: What is the warning threshold for evcc\_precharge\_timeout?
- A: The warning threshold for evcc\_precharge\_timeout is 5. Values greater than 5 but not exceeding 7 indicate a warning status.
- Q: What is the evcc precharge timeout warning range?
- A: The evcc\_precharge\_timeout warning range is values above 5 and up to and including 7.
- Q: When is evcc\_precharge\_timeout considered a warning?
- A: evcc\_precharge\_timeout is considered a warning when its value is greater than 5 but not exceeding 7.
- Q: What value range indicates a success status for evcc precharge timeout?
- A: Values less than 5 for evcc\_precharge\_timeout indicate a success status.
- Q: When is evcc\_precharge\_timeout considered successful?
- A: evcc\_precharge\_timeout is considered successful when its value is less than 5.

## Overall Charging Session Status FAQs

- Q: When is a charging session considered successful?
- A: A charging session is considered successful when all status components (cable\_check\_status, communication\_startup\_status, pre\_charge\_status, ready to charge status) are either "OK" or "Success".
- Q: What conditions must be met for a successful charging session?
- A: For a successful charging session, all of these conditions must be met:
- evcc readytocharge timeout < 148
- evcc communicationsetup timeout < 18
- evcc cablecheck timeout < 38
- evcc precharge timeout < 5
- Q: When is a charging session considered a warning?
- A: A charging session is considered a warning when at least one component status is "Warning" and no component status is "Failure".
- Q: What would cause a charging session to have a warning status?
- A: A charging session will have a warning status if at least one component has a warning status (such as evcc\_readytocharge\_timeout between 148-150) and no component has a failure status.
- Q: When is a charging session considered a failure?
- A: A charging session is considered a failure when any component status
- is "Failure", regardless of other component statuses.
- Q: What would cause a charging session to have a failure status?
- A: A charging session will have a failure status if any of these conditions are met:
- evcc\_readytocharge\_timeout > 150

evcc\_communicationsetup\_timeout > 20
evcc\_cablecheck\_timeout > 40
evcc\_precharge\_timeout > 7

#### General FAQs

Q: What are all the timeout parameters used in the EV charging system? A: The timeout parameters used are: evcc\_readytocharge\_timeout evcc\_communicationsetup\_timeout evcc\_cablecheck\_timeout evcc\_precharge\_timeout

Q: What status values can a charging parameter have?
A: Charging parameters can have one of three status values:
"OK"/"Success", "Warning", or "Failure".

Q: How is the overall charging session status determined?
A: The overall charging session status is determined by evaluating the status of all individual components. If any component has a "Failure" status, the session is a failure. If no components have a "Failure" status but at least one has a "Warning" status, the session is a warning. If all components have an "OK" or "Success" status, the session is successful.

Q: What happens if one parameter is in failure range and others are OK? A: If even one parameter is in the failure range, the entire charging session is considered a failure, regardless of the status of other parameters.

Q: Do all parameters have the same threshold values?
A: No, each parameter has its own unique threshold values:
evcc\_readytocharge\_timeout: 148 for warning, 150 for failure
evcc\_communicationsetup\_timeout: 18 for warning, 20 for failure
evcc\_cablecheck\_timeout: 38 for warning, 40 for failure
evcc\_precharge\_timeout: 5 for warning, 7 for failure

Q: What is the difference between OK and Success status?
A: "OK" is typically used for the ready\_to\_charge\_status, while "Success" is used for communication\_startup\_status, cable\_check\_status, and pre charge status. Functionally, they both indicate a positive status.

Q: What do these timeout values measure?
A: These timeout values measure the time (likely in seconds) that certain processes in the EV charging sequence take to complete. Lower values generally indicate a faster, more efficient charging process.

## Cable Check Status FAQs

- Q: What is the failure threshold for evcc\_cablecheck\_timeout?
- A: The failure threshold for evcc\_cablecheck\_timeout is 40. Any value greater than 40 indicates a failure status.
- Q: What is the evcc cablecheck timeout failure range?
- A: The evcc cablecheck timeout failure range is any value above 40.
- Q: When is evcc cablecheck timeout considered a failure?
- A: evcc\_cablecheck\_timeout is considered a failure when its value exceeds 40.
- Q: What is the warning threshold for evcc cablecheck timeout?
- A: The warning threshold for evcc\_cablecheck\_timeout is 38. Values greater than 38 but not exceeding 40 indicate a warning status.
- Q: What is the evcc cablecheck timeout warning range?
- A: The evcc\_cablecheck\_timeout warning range is values above 38 and up to and including 40.
- Q: When is evcc\_cablecheck\_timeout considered a warning?
- A: evcc\_cablecheck\_timeout is considered a warning when its value is greater than 38 but not exceeding 40.
- Q: What value range indicates a success status for evcc cablecheck timeout?
- A: Values less than 38 for evcc\_cablecheck\_timeout indicate a success status.
- Q: When is evcc cablecheck timeout considered successful?
- A: evcc\_cablecheck\_timeout is considered successful when its value is less than 38.