

Sunbird DCIM Support Request

API Access & Configuration Requirements for AI Agentic Integration

Date: December 2024

Project: AI Agentic Ecosystem for Sunbird DCIM

Integration Platform: n8n Workflow Engine + LangGraph AI Agents

Environment: OpenShift 4.19 (AITP Stack)

Executive Summary

We are implementing an AI-powered automation layer that integrates with Sunbird dcTrack and Power IQ to enable autonomous monitoring, intelligent alerting, and proactive data center operations. This document outlines the API access, credentials, configurations, and features we require from the Sunbird support team.

1. API Access Requirements

1.1 dcTrack REST API Access

Requirement	Details
API Version	v2 (REST API)
Authentication	API Token (Bearer Token) or OAuth 2.0
Base URL Format	<code>https://<dctrack-instance>/api/v2/</code>

API Endpoints Required:

Endpoint	Endpoints Needed	Purpose
Category		
Items/Assets	<code>GET /items</code> , <code>GET /items/{id}</code> , <code>POST /quicksearch/items</code> , <code>PUT /items/{id}</code>	Asset inventory, updates, search
Locations	<code>GET /locations</code> , <code>GET /locations/{id}</code> , <code>GET /locations/{id}/capacity</code>	Site/room/row hierarchy, capacity data
Cabinets	<code>GET /cabinets</code> , <code>GET /cabinets/{id}</code> , <code>GET /cabinets/{id}/items</code>	Rack inventory, U-space usage
Connections	<code>GET /connections</code> , <code>GET /connections/{id}</code> , <code>GET /items/{id}/connections</code>	Network topology, power chains
Capacity	<code>GET /capacity/summary</code> , <code>GET /locations/{id}/capacity</code>	Space, power, cooling capacity
Change Requests	<code>GET /requests</code> , <code>POST /requests</code> , <code>PUT /requests/{id}</code>	Work order management
Audit/Events	<code>GET /audit/logs</code> , <code>GET /events</code>	Change tracking, compliance
Models Library	<code>GET /models</code> , <code>GET /makes</code>	Device specifications

Permissions Required:

- Read access to all assets, locations, cabinets, connections
- Write access for creating/updating change requests
- Read access to audit logs and events
- Access to capacity and utilization data

1.2 Power IQ REST API Access

Requirement	Details
API Version	v2 (REST API)
Authentication	Basic Auth (Username/Password) or API Key
Base URL Format	<code>https://<poweriq-instance>/api/v2/</code>

API Endpoints Required:

Endpoint	Endpoints Needed	Purpose
Category		
Data Centers	<code>GET /data_centers</code> , <code>GET /data_centers/{id}</code>	Site hierarchy
PDUs/Rack PDUs	<code>GET /pdus</code> , <code>GET /pdus/{id}</code> , <code>GET /pdus/{id}/outlets</code>	Power distribution units
Readings	<code>GET /pdu_readings</code> , <code>GET /outlet_readings</code> , <code>GET /measured_readings</code>	Real-time power data
PUE	<code>GET /pue/current</code> , <code>GET /pue/readings</code> , <code>GET /pue/history</code>	Power Usage Effectiveness
Sensors	<code>GET /sensors</code> , <code>GET /sensors/environmental</code> , <code>GET /sensors/temperature</code>	Environmental monitoring
Alerts	<code>GET /alerts</code> , <code>GET /alerts/active</code> , <code>POST /alerts/acknowledge</code>	Alert management
Devices	<code>GET /devices</code> , <code>GET /devices/{id}</code>	IT device power mapping
Cabinets	<code>GET /cabinets</code> , <code>GET /cabinets/{id}/readings</code>	Cabinet-level power/thermal
UPS	<code>GET /ups</code> , <code>GET /ups/{id}/readings</code>	UPS status and readings
CRACs/CRAHs	<code>GET /cooling_units</code> , <code>GET /cooling_units/{id}</code>	Cooling unit data

Permissions Required:

- Read access to all power and environmental data
- Read access to alerts and events
- Write access to acknowledge alerts (optional)
- Access to historical readings for trending

1.3 UniversalConnector G2 Access

Requirement	Details
Feature	UniversalConnector G2 (bidirectional sync)
Purpose	CMDB sync, ITSM integration

Configurations Needed:

Integration	Direction	Data Elements
ServiceNow CMDB	Bidirectional	CIs, relationships, locations
Cisco ACI	dcTrack → ACI	Network topology, port assignments
Custom Webhook	dcTrack → n8n	Change events, asset updates

Request:

- Enable UniversalConnector G2 license/feature
- Documentation on configuring custom webhook destinations
- Mapping templates for ServiceNow CMDB sync

2. Service Account Requirements

2.1 dcTrack Service Account

Attribute	Requirement
Account Name	<u>svc_aitp_integration</u> (suggested)
Account Type	Service Account / API User
Role	Custom role with specific permissions (see below)
Session Timeout	Extended or no timeout for automation
MFA	Exempt from MFA (service account)

Required Permissions:

- View Items (Assets)
- View Locations
- View Cabinets
- View Connections
- View Capacity Data
- View Models Library
- View Audit Logs
- View Change Requests
- Create Change Requests
- Update Change Requests
- API Access Enabled
- Bulk Export (for reconciliation)

2.2 Power IQ Service Account

Attribute	Requirement
Account Name	<code>svc_aitp_poweriq</code> (suggested)
Account Type	API User
Role	Read-only + Alert acknowledgment
IP Restrictions	Whitelist AITP cluster IPs (if applicable)

Required Permissions:

- View Data Centers
- View PDUs and Outlets
- View Power Readings
- View Environmental Sensors
- View PUE Data
- View Alerts
- Acknowledge Alerts (optional)
- View Historical Data
- API Access Enabled
- Access to all locations/data centers

3. Webhook Configuration Requirements

3.1 Power IQ Alert Webhooks

We need Power IQ to send real-time alerts to our n8n workflow engine.

Configuration	Value
Webhook URL	<code>https://workflows.apps.ocp419.crucible.iisl.com/webhook/poweriq-alert</code>
HTTP Method	POST
Content Type	application/json
Authentication	API Key header (optional)

Alert Types to Forward:

Alert Type	Priority	Forward?
Temperature High	Critical	<input checked="" type="checkbox"/> Yes
Temperature Low	Warning	<input checked="" type="checkbox"/> Yes
Humidity High/Low	Warning	<input checked="" type="checkbox"/> Yes
PDU Overload	Critical	<input checked="" type="checkbox"/> Yes
PDU Warning	Warning	<input checked="" type="checkbox"/> Yes
UPS on Battery	Critical	<input checked="" type="checkbox"/> Yes
UPS Load High	Warning	<input checked="" type="checkbox"/> Yes
Sensor Offline	Warning	<input checked="" type="checkbox"/> Yes
Device Offline	Warning	<input checked="" type="checkbox"/> Yes
PUE Threshold	Warning	<input checked="" type="checkbox"/> Yes

Expected Payload Format:

json

```
{
  "alertId": "string",
  "alertType": "temperature_highlpdu_overload...",
  "severity": "critical|warning|info",
  "deviceId": "string",
  "deviceName": "string",
  "location": "string",
  "cabinet": "string",
  "message": "string",
  "currentValue": "number",
  "threshold": "number",
  "timestamp": "ISO8601 string"
}
```

3.2 dcTrack Event Webhooks

We need dcTrack to send change events to our workflow engine.

Configuration	Value
Webhook URL	https://workflows.apps.ocp419.crucible.iisl.com/webhook/dctrack-event
HTTP Method	POST
Content Type	application/json

Event Types to Forward:

Event Type	Forward?
Asset Created	<input checked="" type="checkbox"/> Yes
Asset Updated	<input checked="" type="checkbox"/> Yes
Asset Moved	<input checked="" type="checkbox"/> Yes
Asset Decommissioned	<input checked="" type="checkbox"/> Yes
Connection Created	<input checked="" type="checkbox"/> Yes
Connection Removed	<input checked="" type="checkbox"/> Yes
Change Request Created	<input checked="" type="checkbox"/> Yes
Change Request Approved	<input checked="" type="checkbox"/> Yes
Change Request Completed	<input checked="" type="checkbox"/> Yes

4. Data Export Requirements

4.1 Initial Data Load

For building the AI knowledge base, we need a one-time bulk export:

Data Set	Format	Purpose
All Assets	CSV/JSON	Asset inventory baseline
All Locations	CSV/JSON	Location hierarchy
All Cabinets	CSV/JSON	Rack inventory
All Connections	CSV/JSON	Network/power topology
Models Library	CSV/JSON	Device specifications
Historical Power Readings (90 days)	CSV	PUE trending baseline
Historical Alerts (90 days)	CSV	Alert pattern analysis

4.2 ODBC Access (Optional)

Requirement	Details
Purpose	Direct database queries for complex analytics
Access Type	Read-only ODBC connection
Tables Needed	Assets, Locations, Cabinets, Connections, Readings

5. Feature Enablement Requests

5.1 dcTrack Features

Feature	Status Needed	Purpose
REST API	Enabled	Core integration
ODBC Access	Enabled (optional)	Complex queries

Feature	Status Needed	Purpose
UniversalConnector G2	Licensed & Enabled	ITSM/CMDB sync
Audit Logging	Enabled	Compliance tracking
Webhook Notifications	Enabled	Real-time events
Bulk Export	Enabled	Initial data load
Dashboard Widgets API	Enabled	Custom KPI retrieval

5.2 Power IQ Features

Feature	Status Needed	Purpose
REST API	Enabled	Core integration
Webhook Alerts	Enabled	Real-time alerting
PUE Calculation	Enabled & Configured	Efficiency monitoring
Environmental Monitoring	Enabled	Thermal analysis
Historical Data Retention	90+ days	Trending/ML training
Multi-site Access	Enabled	Cross-DC monitoring

6. Network & Security Requirements

6.1 Firewall/Network Access

Our integration servers need network access to Sunbird endpoints:

Source	Destination	Port	Protocol
workflows.apps.ocp419.crucible.iisl.com	dcTrack API endpoint	443	HTTPS
workflows.apps.ocp419.crucible.iisl.com	Power IQ API endpoint	443	HTTPS
langserve.apps.ocp419.crucible.iisl.com	dcTrack API endpoint	443	HTTPS
langserve.apps.ocp419.crucible.iisl.com	Power IQ API endpoint	443	HTTPS

Source IP Addresses (for whitelisting):

- Primary: <to be provided>
- Secondary: <to be provided>

6.2 SSL/TLS Requirements

Requirement	Details
TLS Version	TLS 1.2 or higher
Certificate	Valid CA-signed certificate
Certificate Validation	Required (or provide CA bundle)

7. Documentation Requests

Please provide the following documentation:

Document	Purpose
dcTrack REST API Reference (v2)	API endpoint documentation
Power IQ REST API Reference (v2)	API endpoint documentation
UniversalConnector G2 Configuration Guide	CMDB sync setup
Webhook Configuration Guide	Alert forwarding setup
Data Model/Schema Documentation	Field mappings
Rate Limiting Information	API throttling limits
Error Code Reference	Error handling

8. Support & Escalation

8.1 Technical Contact Request

We request a dedicated technical contact for this integration project:

Need	Details
API Integration Support	Questions about API usage, edge cases
Webhook Configuration	Help setting up alert forwarding
Performance Optimization	Bulk query optimization
Troubleshooting	Issue resolution

8.2 Environment Details

Environment	Purpose	Priority
Development/Sandbox	Initial development, testing	High
Staging/UAT	Pre-production validation	Medium
Production	Live integration	High

9. Timeline & Priorities

Phase 1 (Immediate - Week 1-2)

Priority	Requirement
🔴 Critical	dcTrack REST API credentials
🔴 Critical	Power IQ REST API credentials
🔴 Critical	API documentation
🟡 High	Webhook configuration for Power IQ alerts

Phase 2 (Week 3-4)

Priority	Requirement
🟡 High	dcTrack event webhooks
🟡 High	Initial data export (bulk)
🟢 Medium	UniversalConnector G2 setup

Phase 3 (Month 2)

Priority	Requirement
● Medium	ODBC access (if needed)
● Medium	Historical data export
● Low	Dashboard Widgets API access

10. Contact Information

Project Team:

Role	Name	Email
Project Lead	[Your Name]	[email]
Technical Lead	[Name]	[email]
Integration Engineer	[Name]	[email]

Preferred Communication:

- Email for documentation and credentials
- Video call for technical walkthroughs
- Ticket system for ongoing support

Appendix A: Sample API Calls

dcTrack - Get All Assets

```
bash

curl -X GET "https://<dctrack>/api/v2/items" \
-H "Authorization: Bearer <token>" \
-H "Content-Type: application/json"
```

Power IQ - Get Current PUE

```
bash
```

```
curl -X GET "https://<poweriq>/api/v2/pue/current" \
-u "username:password" \
-H "Content-Type: application/json"
```

Power IQ - Get Temperature Sensors

```
bash

curl -X GET "https://<poweriq>/api/v2/sensors/environmental?type=temperature" \
-u "username:password" \
-H "Content-Type: application/json"
```

Appendix B: Expected Response Formats

dcTrack Asset Response

```
json

{
  "searchResults": {
    "items": [
      {
        "id": 12345,
        "tiName": "Server-001",
        "tiSerialNumber": "ABC123",
        "cmbLocation": "DC1/Room1/Row1",
        "cmbCabinet": "Rack-A1",
        "tiClass": "Device",
        "cmbStatus": "Installed"
      }
    ],
    "totalRecords": 1500
  }
}
```

Power IQ PUE Response

```
json
```

```
{  
    "pue": 1.45,  
    "itPowerKw": 450.5,  
    "facilityPowerKw": 653.2,  
    "timestamp": "2024-12-23T10:30:00Z",  
    "datacenterId": "DC1"  
}
```

Appendix C: Checklist for Sunbird Support

dcTrack Checklist

- Create service account `svc_aitp_integration`
- Assign required permissions/role
- Generate API token
- Enable REST API access
- Configure webhook for events
- Provide API documentation
- Whitelist source IPs (if required)

Power IQ Checklist

- Create service account `svc_aitp_poweriq`
- Assign required permissions
- Enable REST API access
- Configure webhook for alerts
- Provide API documentation
- Enable PUE calculation
- Verify historical data retention

Documentation Checklist

- REST API Reference (dcTrack)
 - REST API Reference (Power IQ)
 - Webhook Configuration Guide
 - Data Model Documentation
 - Rate Limiting Information
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Document Version: 1.0

Last Updated: December 2024

Status: Ready for Submission to Sunbird Support