<table>
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<tr>
<th>Time</th>
<th>Session</th>
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<tr>
<td><strong>Sunday, September 10</strong></td>
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</table>
| 5:15 - 5:30 p.m. | Registration  
Guest and First-Time Attendee Registration – Conference materials will be available at the Network registration table. |
| 5:30 - 6:00 p.m. | Orientation  
Guest and First-Time Attendee Orientation – Scott Killan, Uptime Institute Network Director-North America, will host guests and first-time attendees for a brief history of the Network and an orientation to the conference. |
| 5:45 - 7:30 p.m. | Registration  
General Member Registration – Conference materials will be available at the Network registration table. |
| 6:00 - 7:30 p.m. | Reception  
Welcome Reception - Join us for an enjoyable networking opportunity and show your support for your favorite sports team, college or pro (football, baseball, basketball, hockey) |
| **Monday, September 11** |                                                                                               |
| 8:00 - 8:15 a.m. | Breakfast  
General Attendees Breakfast |
| 8:15 - 8:30 a.m. | General  
Conference Welcome – Scott Killan will open the conference with general announcements and membership updates. |
| 8:30 - 9:30 a.m. | General  
Executive perspective – Martin McCarthy, CEO of Uptime Institute and The 451 Group, will provide an overview of the status of Uptime Institute and The 451 Group. |
| 9:30 - 10:15 a.m. | Keynote  
Data Gravity and the Post 5G Edge – Cole Crawford, CEO @ Vapor IO, will present on how we will deal with billions upon billions of connected devices that will fundamentally drive a paradigm shift in our industry and serve as the foundation for the internet of everything. |
| 10:15 - 10:30 a.m. | Break  
Refreshments available |
| 10:30 – 11:15 a.m. | General  
Data Center Outage Panorama – Matt Stansberry, Uptime Institute Sr. Director of Content & Publications, and Pitt Turner, Uptime Institute Network Global Executive Director, will review recent industry outages and root causes based on Uptime Institute and 451 Research analysis, and talk about impacts and possible lessons learned. Matt Stansberry will also provide an update on the new services offered to Network members: Network community project utilizing Wisegate, and member access to Inside Track. |
| 11:15 a.m. – 12:00 p.m. | General  
Abnormal Incident Report Trending Presentation – Katie Broderick, Research VP, 451 Alliance, and Juan Orozco, Uptime Institute Consultant, will review trends from incidents added over the last year to help attendees identify opportunities to apply resources to best minimize downtime risks. |
| 12:00 p.m – 1:30 p.m. | Lunch  
Lunch Table Topic Discussion |
| **Afternoon Concurrent Sessions** |                                                                                               |
| 1:30 – 2:15 p.m. | Track A - Best Presentation  
Kyoto Cooling at United Airlines – Patrick Lamp, Manager of IT Electrical Infrastructure at United Airlines, along with John Kolar, VP Mission Critical Solutions at Air Enterprises/Kyoto Cooling, will share the implementation of Kyoto Cooling at United Airlines. |
| 2:15 – 3:00 p.m. | Track A - Best Presentation  
How Cyxtera Automated AIR Reporting to the Uptime Institute – Troy Smith, Manager, Data Center Engineering Shared Services at Cyxtera, will provide an overview of how Cyxtera revamped their collection of Abnormal Incident details, and how they automated their reporting to the Uptime Institute. The current technical architecture, lessons learned, and next steps will be presented. |
### Tuesday, September 12

#### 7:00 - 8:00 a.m.
- Breakfast
- General Attendees Breakfast

#### 8:00 - 8:45 a.m.
- Tour Presentation
- Data Center Tour Host Presentation -- Tour host welcomes tour participants and provides a narrative on their site’s IT and Facilities business objectives.

#### 8:45 - 9:00 a.m.
- Break
- Refreshments Available

#### 9:00 - 10:00 a.m.
- Travel to Data Center
- Travel by bus to data center site and security check-in

#### 10:00 a.m. - 12:30 p.m.
- Data Center Tour
- Data Center Tours to be conducted by the host Network members –
  - Tour Group A: AT&T
  - Tour Group B: Compass Datacenters
  - Tour Group C: T5 Data Centers
  - Tour Group D: Verizon Communications

#### 12:00 - 12:45 p.m.
- Travel back to Hotel
- Travel by bus back to hotel

#### 1:00 - 2:30 p.m.
- Lunch
- General Attendees Lunch

#### Afternoon Concurrent Session

#### 2:30 - 3:45 p.m.
- Tour Feedback
- Data Center Tour Feedback Sessions – Attendees will meet with their assigned tour group to note best practices and opportunities for improvement observed during their data center tours.
  - Tour Group A: AT&T
  - Tour Group B: Compass Datacenters
  - Tour Group C: T5 Data Centers
  - Tour Group D: Verizon Communications

#### 3:45 - 4:00 p.m.
- Break
- Refreshments available

#### 4:00 - 5:00 p.m.
- Guest Speaker
- Infeasible or Inconvenient: Implementing Electrical Safety Program and Justification of Energized Work – John Kovalan, President, and Joshua Maestas, Sr. Safety & Technical Associate for LP Management Services, will review the requirements of NFPA 70E with regard to Energized Electrical Work Permits (EEWP), including the justifications for energized work, data center specific examples of allowed energized electrical work tasks, and how to use EEWP’s into a MOP for major maintenance activities. They will also be discussing OSHA’s 1910.147 requirements for site/equipment specific Lockout Tagout (LOTO) procedures, reviewing OSHA’s Letters of Interpretation that pertain to LOTO, and provide tips on how to incorporate LOTO into the planning stage of a shutdown to ensure compliance while minimizing equipment downtime.

#### 7:00 - 9:00 p.m.
- Awards Banquet Program:
  - 6:00 – 7:15 p.m. Dinner
  - 7:15 – 8:15 p.m. Presentation of Awards
  - 8:15 – 8:45 p.m. Award Photos

#### Awards Banquet -

#### 5:00 - 6:00 p.m.
- Awards Banquet Reception
- Join us for drinks and hors d'oeuvres leading up to the awards banquet.

#### 9:00 - 9:30 p.m.
- Awards Banquet
- Uptime Institute Network Awards Banquet – Join us in recognizing Network members that have achieved Data Center Uptime Performance Awards, and for the announcement of the 2017 Larry Rushing Award recipient.

#### Award Photos

#### 8:15 – 8:45 p.m.
- Award Photos

#### 7:00 - 8:00 a.m.
- Steering Committee Breakfast

#### 8:45 – 9:15 p.m.
- Tour Group B: Compass Datacenters
- Tour Group A: AT&T
- Tour Group D: Verizon Communications

#### 9:15 – 10:00 a.m.
- Tour Group D: Verizon Communications
- Tour Group B: Compass Datacenters
- Tour Group A: AT&T

#### Data Center Tours & Sessions -

#### 8:00 – 8:45 a.m.
- Tour Group C: T5 Data Centers
- Tour Group D: Verizon Communications

#### 8:45 – 9:00 a.m.
- Break
- Refreshments Available

#### 9:00 – 9:15 a.m.
- One-Line Review
- Review of One-Line Diagrams and Site Facts

#### 9:15 - 10:00 a.m.
- Travel to Data Center
- Travel by bus to respective tour site(s). All tour groups will return to the hotel for lunch followed by independent group Tour Feedback Sessions.

#### 10:00 a.m. - 12:30 p.m.
- Data Center Tour
- Data Center Tours to be conducted by the host Network members –
  - Tour Group A: AT&T
  - Tour Group B: Compass Datacenters
  - Tour Group C: T5 Data Centers
  - Tour Group D: Verizon Communications

#### Lunch
- General Attendees Lunch

#### Prinicipals Lunch Session
- Prinicipals Lunch Discussions – Principal members (one member from each Network company) will meet separately with their Network Group to review specific agenda items submitted by the Network Director. Principals, please fix your plate from the lunch buffet and report to your meeting room as indicated below. Please note: Water, iced tea, coffee, silverware, condiments, and desserts will be preset in your meeting room.

#### Free Evening -

### Data Center Facilities Staffing Models and a Successful Case for Expansion –

Jim Anich, Senior Manager at Verizon. The presentation includes a staffing study of 30 data centers and how this information was leveraged to increase the number of on-site Facilities Engineers by 76% at no cost.

### Reliability and Resilience through Smart Water Management –

Emilio Tenuta, VP of Corporate Sustainability at Ecolab. Data centers rely on water to consistently deliver the mass amounts of data the world relies on. With demand for water expected to outpace supply by 40% by 2030, it is essential for data centers to adopt smart water management practices to maintain reliable and resilient performance and meet growing demand. Water use within a data center is complex and factors including water scarcity, variable water quality, changing regulations and increasing costs can significantly impact a center’s performance and costs. As demand for data increases, the need to rethink operations to be less reliant on water is increasingly important. And when done right, smart water management can optimize operations, reduce costs and enable growth.

### Disrupted Data Center: Cloud-based Resiliency Spread Workloads Across Data Centers –

Todd Traver, VP IT Optimization and Strategy at Uptime Institute, will present on the opportunities, benefits and challenges to successful implementation of a resilient multi-site workload solution. The evolution of compute from single-site data centers with proven in-house engineering to a multi-site hybrid computing model is enabling distributed models of resiliency that can achieve high availability and rapid recovery alongside improved performance. The recent move by many to the public cloud is further accelerating this cloud-based resiliency approach. The benefits are potentially vast. But there are also risks and limitations created by the complex software and coordination of new third-party services and technologies necessary to orchestrate the applications and data.

### Infeasible or Inconvenient: Implementing Electrical Safety Program and Justification of Energized Work –

John Kovalan, President, and Joshua Maestas, Sr. Safety & Technical Associate for LP Management Services, will review the requirements of NFPA 70E with regard to Energized Electrical Work Permits (EEWP), including the justifications for energized work, data center specific examples of allowed energized electrical work tasks, and how to use EEWP’s into a MOP for major maintenance activities. They will also be discussing OSHA’s 1910.147 requirements for site/equipment specific Lockout Tagout (LOTO) procedures, reviewing OSHA’s Letters of Interpretation that pertain to LOTO, and provide tips on how to incorporate LOTO into the planning stage of a shutdown to ensure compliance while minimizing equipment downtime.
**Wednesday, September 13**

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<tr>
<th>Time</th>
<th>Session</th>
<th>Description</th>
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<tr>
<td>7:00 – 8:00 a.m.</td>
<td>Breakfast</td>
<td>General Attendees Breakfast</td>
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<td>Steering Committee Breakfast</td>
<td>Steering Committee members only will meet over breakfast with Scott Killian to review the outcomes from yesterday's Principals lunch sessions.</td>
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<td>8:00 – 9:00 a.m.</td>
<td>Keynote Panel Discussion</td>
<td>DCIM - Why has it struggled? - Andy Lawrence, 451 Research VP of Datacenters &amp; Critical Infrastructure, and Matt Stansberry, Uptime Institute’s Sr. Director of Content &amp; Publications, will moderate a panel discussion on the struggles of end-users to deploy DCIM with representatives from Nylte, Schneider Electric, and Veriv. Members will also be provided time to ask questions of the panel.</td>
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<td>Morning Concurrent Sessions -</td>
<td>Note: Best Presentations are highly rated encore presentations from the Network’s 2017 Spring Conferences provided for the benefit of those who did not see the original presentation.</td>
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<tr>
<td>9:00 – 9:45 a.m.</td>
<td>Track A - Best Presentation</td>
<td>Remediation of Single Corded Devices – Hudson Data Center - Mike Smith, IT Data Center Manager, and Bill McCary, Facilities Data Center Manager, Allstate Insurance Company, will present on a project: The Raised Floor team (IT) and Facilities Team were tasked with bringing 2 new PDU's online and later performing scheduled UPS maintenance. The site had too many single corded devices in place to schedule an outage, or perform A side B side shutdown for UPS maintenance. The presentation will walk through our process and speak to the benefits that came from this project.</td>
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<td>Track B - Best Presentation</td>
<td>Mechanical Equipment Yard Storm Protection Enclosure at US Bank – Carl Tyler of US Bank will cover the initial design intent requirements, wind tunnel testing, construction challenges, and project timeline.</td>
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<td>9:45 - 10:30 a.m.</td>
<td>Member Presentation (LATAM)</td>
<td>Increased Reality Applied to Critical Operational Processes, Operation and Training in Entel’s Data Center – Juan Muñoz Moyano, Manager Infrastructure - VP Corporations, at Entel. Considering that in the standard operating procedures of a Data Center, there are critical procedures that require a large number of actions on equipment and systems, and these actions must be executed in sequence and without errors, Entel has detected the need to support these processes with a software tool that helps the operational team to reduce the risk of human error, contributing to the success of the critical procedures.</td>
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<td>10:30 - 10:45 a.m.</td>
<td>Break</td>
<td>Refreshments available</td>
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<td>10:45 - 11:30 a.m.</td>
<td>Uptime Institute Presentation</td>
<td>Top Challenges to Data Center Availability – Steve Burgess, Sr. Consultant at Uptime Institute, will analyze the top 14 risk management challenges facing data center operators. Based on years of field experience and Uptime Institute data, this presentation covers 14 technological, human, and equipment vulnerabilities common to almost all data centers and provides proven solutions for managing and mitigating the resulting risk.</td>
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<td>11:30 a.m. - 12:15 p.m.</td>
<td>451 Research Presentation</td>
<td>Datacenters at the Edge – Andy Lawrence, VP of Research for Datacenter Technology at 451 Research, considers the arguments both for and against the rapid buildout of datacenters at the edge, and discusses edge architectural schemas, new datacenter types, and an assessment of the types of workloads they will likely support.</td>
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<td>12:15 - 12:30 p.m.</td>
<td>General</td>
<td>Will the need for datacenter capacity for edge computing and the Internet of Things lead to new datacenter form factors? Will it mean new cloud computing and networking approaches? In this presentation, Andy Lawrence, VP of Research for Datacenter Technology at 451 Research, considers the arguments both for and against the rapid buildout of datacenters at the edge, and discusses edge architectural schemas, new datacenter types, and an assessment of the types of workloads they will likely support.</td>
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<tr>
<td>Wednesday, September 13</td>
<td>LATAM Network Breakout Session -</td>
<td>Note: This breakout session is planned for LATAM Network members and their guests only. Lunch will be provided to LATAM Network members and guests during this session. The session will be conducted mostly in Spanish.</td>
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<td>1:00 - 1:15 p.m.</td>
<td>General</td>
<td>Breakout Session Opening Remarks – Mozart Mello, Uptime Institute Managing Director for LATAM, will provide opening comments and lead a discussion with LATAM Network members and guests on topics of interest.</td>
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<td>1:15 - 2:00 p.m.</td>
<td>Member Presentation</td>
<td>Entel’s Data Center Ciudad de los Valles III – Description of design and facility of the new Entel Data Center in Ciudad de los Valles.</td>
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<td>2:00 - 2:45 p.m.</td>
<td>Member Presentation</td>
<td>TBD</td>
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<td>2:45 - 3:00 p.m.</td>
<td>General</td>
<td>Breakout Session Closing Remarks – Mozart Mello will provide closing remarks and announcements.</td>
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